

# THE ARCHITECTURAL RECORD

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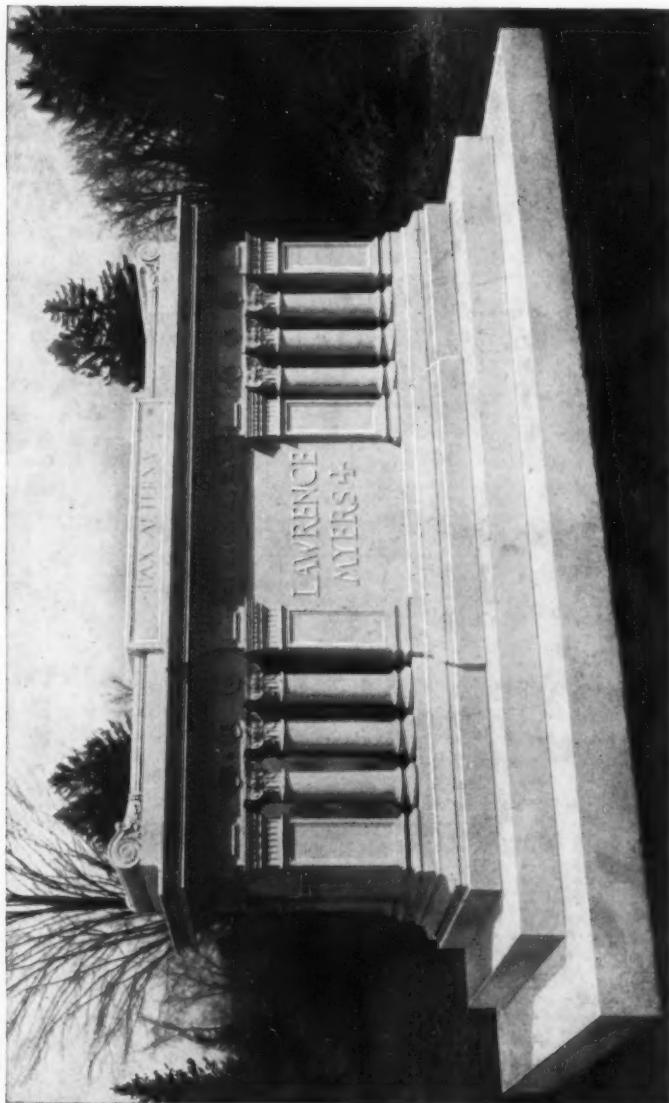
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# The Architectural Record

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## The Influence of the Ecole des Beaux-Arts On Our Architectural Education

This article is the second of a series beginning in the issue of November, 1907, and dealing with the influence which the Paris School of Fine Arts has exerted in the United States. The author is Professor Hamlin, Executive Head of the School of Architecture at Columbia University in New York. While Mr. J. Stewart Barney, author of the first article, treats his subject from the standpoint of a practicing architect, and in its direct influence on American architecture, the author of the present article assumes a scholastic position which his experience as a teacher of architectural subjects and as a director of architectural instruction qualifies him eminently to assume.

Many of our architect-readers will, no doubt, fall in with Professor Hamlin's ideas and sympathize with his attitude, while as many more will hold other views. We trust that all our readers, not only the architects, will take some measure of interest in a subject the object lessons of which are ever before the public.—Editors.

It is now somewhat over fifty years since the late Richard M. Hunt entered the Paris Ecole des Beaux-Arts, the first of the long line of American students of architecture who have sought the discipline and inspiration proffered by that hospitable institution. For a half-century the stream of American students into the Ecole has continued in increasing numbers, and through them the Paris school has become a potent influence on American architecture. Whether this has been, on the whole, a salutary influence in the past, is so now, or will be in the future, are questions which are being asked with increasing frequency and receiving divers answers from different sources. The first of these three questions is chiefly historical; the second demands a critical estimate of contemporary tendencies; the third is a very practical and personal question for many a parent and many a student, for it involves the problem of the most desirable architectural education and of the disposal of several of the most critical years of a young man's life. Perhaps the

opinions of an old-time Beaux-Arts student (1878-81), whose active life for twenty-five years has been chiefly devoted to this problem as a teacher of architecture, may be of some interest to readers of the ARCHITECTURAL RECORD.

### I.

So far as the past is concerned, the debt of American architecture to the French school is incontestable. During the Civil War, and the ten years each preceding and following it, our architecture was floundering in the lowest depths of tastelessness and artistic poverty. There were few educated architects; the popular standards were almost grotesquely inartistic, and really fine architecture was nearly as impossible to execute as unlikely to be appreciated. A few brave souls were, however, striving, in the face of these conditions, to raise the standards of public taste and of the profession, by the quality of their own work as well as by their training of young men in their offices, whom

they fired with the enthusiasm of their own zeal. Three names stand foremost in this roll of honor: R. M. Hunt, H. H. Richardson and W. R. Ware; and all three drew from Paris a large part of their inspiration; Mr. Hunt and Mr. Richardson for the educational work they carried on in their offices, as well as for their professional achievements in practice; Mr. Ware for the organization of the earliest American school of architecture in the Massachusetts Institute of Technology in Boston.\* Until the beginning of the great art revival which dates from 1876, these three were like "voices crying in the wilderness," but in the following years their labors began to bear fruit, and they became acknowledged leaders in the movement. By 1880 there were constantly a dozen or fifteen Americans in the Ecole at Paris; there were in our own country three schools of architecture, with a fourth about to be opened in Columbia University; scores of American students returned from Paris were practicing for themselves or helping to build up the reputation of great offices in which they worked. In all the schools, Paris-trained men were in demand as instructors, and an entirely new standard and style of draftsmanship and design were being established in the profession.

The contribution of Paris to our architecture during this period was threefold: It supplied a professional training at that time unattainable elsewhere; it gave us new standards of draftsmanship; and it taught our architects new ideas of monumental planning and composition. It is hard now to realize the poverty of ideals formerly prevailing even in the offices, the general lack of broad and monumental conceptions, both in the planning and in the interior composition of our buildings, to say nothing of the poor and flimsy construction then tolerated and of the uninspired mechanical draftsmanship with which the architects' designs were presented. It is almost wholly due to the direct and

indirect influence of the Paris school that we have emerged from the shadows of those dark ages, and that our architecture has taken on a character of straightforward design and rational and often artistic planning and composition, unknown thirty years ago.

During this period there was very little direct copying or imitation of French models. The foreign influence was felt less in the types and details of American buildings than in a new spirit, new standards and ideals. It would be difficult to name a building of Mr. Hunt's which betrays any notable analogies to Ecole types. Even his fine *néo-grec* Lenox Library is a strongly individual design. Mr. Richardson abandoned Renaissance *motifs* for the Romanesque very early in his career. But as the number of Paris-trained architects and draftsmen increased and as the constantly swelling tide of travel to Europe and the multiplication of periodicals and illustrations made our people more and more familiar with the foreign masterpieces of architecture, it was inevitable that the Parisian influence should extend itself to the details, and perceptibly modify the types of our public architecture. Moreover, the Ecole had furnished the model upon which all our American schools were shaping the teaching of design, and in a majority of cases for the last twenty years and more the instructors in design in these schools have been Paris-trained men, and in many instances Frenchmen. When we add to these influences that of the many ateliers in widely separated cities, organized under the auspices of the Society of Beaux-Arts Architects, during the last fourteen years, we see an array of agencies for disseminating French ideas and methods which abundantly explains their present vogue.

## II.

Whether this influence is at present salutary or the reverse is our second question. How far is it based on solid merit and how far on superficial appearances and fictitious excellences? And do the merits of the French system outweigh its defects? It must be borne

\*Professor Ware was not himself a student in the Beaux-Arts, but he was a pupil of Hunt's and based his organization of the Boston school largely on the model of the Ecole, which he was familiar with and had visited in 1865-'66.



in mind that the teaching of the Paris school has not always been uniform and unchanging, either in its controlling ideas or its details. Art in France has been too vital to resist the influences of progress or even of prevailing fashions. But it has always rested upon a solid basis of accumulated experience and tradition which has grown up since the founding of the school under Louis XIV. This solid structure of crystallized experience has seemed to many too inert for real efficiency, and its tendency has, no doubt, always been toward conservatism. For this very reason, while its methods and details have varied from time to time, it has on the whole successfully resisted the vagaries, fads and novelties which so often tempt the educator from the safer paths of discipline into wasteful and unhappy experiments. Originality and innovation belong to the designer's maturity; the discipline most needed by the student is in the fundamentals of architectural conception and expression; and the traditions of the Paris school have always tended to curb his eccentricities and to teach him to do well and thoroughly the accepted and established thing. This is the function of the "plan type" and the "parti type" of so many of the familiar problems given out. The fundamental importance of the plan is always insisted upon; composition is exalted above detail; the presentation or "rendering" is according to well-developed principles and traditions. The student is made to study and re-study his design in all its aspects, to draw and re-draw, constantly revising the design—plan, section and elevation being carried along more or less together through all these revisions. In the daily criticism of the fellow-students as well as the occasional criticisms of the *patron*, it is primarily the artistic considerations that are emphasized. It is a somewhat conventional system and tradition, but a very salutary discipline for the youngster. It has the qualities of its defects; it is not "practical" but artistic in its aims and spirit. It does not encourage the study of mechanical and utilitarian details; that is perhaps its weakness. But it does open the stu-

dent's eyes to the artistic factors and possibilities of the problem. It accustoms him to thinking of the building as an artistic unit, as primarily and always a work of art, an object of artistic design in plan, composition and detail.

It is, no doubt, these qualities in the Paris teaching which have most attracted American students. The atmosphere of American city life is not artistic. Utility and cost are dominant considerations in nearly all public enterprises. The whole pressure of our feverish material activity tends to crush out the vital spark of imagination, and to relegate beauty to the lowest place among the factors of design; witness the lack of decorative sculpture and of imaginative mural decoration in our architecture generally. In the Paris school the American student breathes a different atmosphere, aesthetically exhilarating and illuminating. When he returns, the material considerations impose themselves upon him as before, but they weigh less heavily upon him. If he has really profited by his sojourn abroad, imagination and a more highly artistic taste will assert themselves in all his future work.

Incidental, moreover, to this discipline are other factors of great importance. The French have a peculiar skill in the sort of suggestive criticism which the student needs; a quick perception both of faults and merits, an incisive manner of statement, which are very stimulating. The atelier traditions of mutual help between the younger and older students are valued by every one who has come under them, at least in his younger days. Equally valuable surely is the environment of the student, surrounded as he is by notable monuments of architecture and galleries filled with the masterpieces of all the ages. The whole city is a museum, and within a few hours' ride are hundreds of superb buildings, ancient, mediaeval and modern. The treasures of Rome and Italy, the cathedrals of England and the picturesque monuments of Spain and of Germany, may be visited at the cost of a trip like that from New York to Buffalo or Chicago. The unconscious education of the Old World environment is as important, often, as

the conscious training of the atelier. These combined advantages quite suffice to explain the popularity of the Ecole with American students; while the facility and ready resource in draftsmanship and often in design, which they there acquire, accounts for the demand which always exists in the offices for their services.

But conditions change, and it has now become a pertinent question whether what these young men have thus gained abroad is really what is most needed here. Is the influence they bring to bear upon our current architecture wholly an advantage? The answer is not as easy as was that to the first question of the three we have propounded.

In the first place, there are now in the United States five or six large and important schools of architecture and three or four others in the second rank, besides a considerable number of departments giving architectural instruction, in technical schools and other institutions. To these must be added not only the very extensive work in design conducted by the Society of Beaux-Arts Architects, but innumerable evening classes in various cities. There has thus grown up in this country a vast apparatus for the teaching of architecture to all grades and classes of students, from the office boy to the advanced post-graduate. There is no danger of such a dearth of draftsmen, possessed of at least an elementary training, as existed twenty-five years ago, nor is Paris any longer the one place in the world where a really efficient and artistic training can be had. Moreover, our architecture has undergone an extraordinary evolution—almost a revolution—since the Centennial of 1876; indeed, since the Columbian Fair at Chicago. It has advanced along two lines, that of monumental planning and composition, thanks largely to the earlier influences of the Paris school and schoolmen; and that of scientific construction, as a result of wholly native American initiative. Thus we have been outgrowing the need of absolute reliance on Parisian inspiration on the one hand, while on the other we have been develop-

ing wholly new types for which the traditional French architecture has no analogues and can furnish little suggestion—at least little that is really appropriate.

Now if the hosts of returning Ecole men had been always able to distinguish between what is fundamental and what is superficial in their Parisian experiences, there would be less question of the value of their training as a preparation for American practice. But it would seem that many of them have been dazzled with a false glamour, or bewitched by the artistic jargon and cant of the ateliers, into glorifying the superficial and the external, and forgetting the eternal and fundamental principles which give whatever is valuable to their foreign training. Confused and bewildered by the lack of correspondence between the ideals of the atelier and the conditions which here confront them, such men have with little discrimination unloaded upon their operations and office buildings, their houses and chapels and stables, the stock forms of the atelier. And the often uneducated youths whose cleverness with pen and brush has won them mentions and medals in Beaux-Arts competitions in our own cities, have imitated and sometimes surpassed the foreign-trained men in the adoption of the French architectural vernacular for the buildings they have designed, "Cartouche architecture" has become a by-word in New York. And the very cleverness of presentation, the technical skill of draftsmanship, the facility with which these forms are used, help the vogue of this mistaken art among the uncritical, while they discredit at the same time such elements as are really sound in the training of these young men, among those who, with truer taste discern the hollowness of this architectural trickery.

Moreover, there has been, whether justly or not, but unmistakably growing, among the older men, including many who gratefully acknowledge the value of their own Paris studies, a feeling that the Ecole is no longer wholly true to the best of its old traditions. We are no doubt naturally *laudatores temporis acti*, or it may be, on the other hand, that the

Ecole training seems to us less sound now than it used to be, not because the old ways were better in Paris than now, but because the new ways are better here than they once were. We try to take a detached view in judging both the old and the new alike in Paris and in the United States, and we believe that the Ecole draftsmanship is to-day less thorough, less careful and studied than it once was, and that the pursuit of the new has to some extent diverted the Ecole from the pursuit of the beautiful. This may be a transition to better things which shall be both new and beautiful, but even if it so be, the present state of the Ecole training—its spirit and its standards—seem to us to-day less fitted to train the young American's taste and artistic habits for the special problems of his professional career than was formerly the case. Our own schools do the work more efficiently and fittingly in almost all particulars. Certainly in all that relates to construction and practice, as well as to the history and theory of the art, the teaching in our leading schools is fully equal if not superior to that of the Ecole. I say this with full recognition of the fact that Julien Guadet, the author of the famous treatise on the Theory of Architecture, still lectures at the Beaux-Arts. Feeble as he is, in his advanced years, his discourses on the fundamental principles are stimulating and suggestive; but for American students what he has to say of the planning of theatres and libraries, hospitals and schools and churches, is either so far removed from American ideas and practice or so far behind them as to be a detriment rather than an advantage to the American.

The same is, in the judgment of many thoughtful men, true of the entire course

for the *diplôme*—that crowning honor which looms so large in the estimation of many young Americans. In France the *diplôme* has official significance and prestige; it is a passport to government employ, and its value both in a business way and socially is very great. It has, of course, no such significance here, and the prestige of the postscription *Diplômé par le gouvernement* is with us variable and problematic. It costs the American student four to six years of study in Paris. If he has already taken a four years' course in an American school of architecture, it means that he has devoted two or three years of his time in Paris merely to repeating what he has already gone over in the American school; and that, of the remaining two or three years the greater part is devoted to the study of methods of construction and practice wholly foreign to our systems, and the rest to advanced work in design which constitutes the only really valuable part of the whole long program. And even this advanced work in design might have been carried on in the American school. All the larger schools of this country are perfectly well equipped for such post-graduate work in design, and teach it in the judgment of many quite as well as it is done in Paris.\*

### III.

Coming, then, to the third and last of our questions, that as to the future value of the French influence and training, my own convictions have been by recent experience greatly strengthened on the following propositions:

*First*, that so far as actual professional training is concerned the American schools are doing, and will in the future continue to do, better and more efficient

\*This last statement will, I fear, be condemned as rank heresy by the thick-and-thin advocates of study in Paris. But certain recent experiences are valid evidence in its support. For some years past graduate and advanced non-graduate students registered in the Columbia University school have been doing their work in design in Paris ateliers, upon programs sent out by the Columbia Committee on Design, and have sent their work back to be judged by the same juries which pass upon the work of the Morningside Heights students. These juries are composed of the heads or associate directors of the three Columbia ateliers with from one to three "outside" architects from downtown offices. In every case, so far as I know, every member of the jury has been a Beaux-Arts man, so that there could

have been no prejudice against the Paris men or their work. Yet in every instance the jury has pronounced that work disappointing in quality, both as to design and presentation, and has ranked it on the average below the work of the students in New York. It will be interesting to note whether the continuance of this international experiment further confirms the verdict of the juries referred to. I do not care to attach too much importance to these results, but I think they tend to disprove the superstition, founded upon conditions that have passed away, that the teaching of design in Paris is so greatly superior to our own as to be worth the sacrifice of four or five precious years of the student's life after graduation from the American school.

work for Americans than the Paris school is doing or can do in all that relates to the history, theory, science and practice of the profession. Why should they not? They have adopted from the French school all that has been found in its methods to be best fitted for American conditions; they have added to these the accumulated results of American experience and the best of American methods; they are officered by teachers thoroughly trained and full of devotion and enthusiasm; they are for the most part admirably housed and equipped, and they naturally appreciate American requirements and conditions as the French school and teachers can never do.

*Secondly*, even in the field of design the American teaching is now fully on a par with the French, and must in the future become increasingly well adapted to the special needs and conditions of American practice, and, so far forth, better for Americans than even the brilliant French teaching.

*Thirdly*, in the nature of things American architecture cannot and should not continue to be dependent upon French ideas, taste, or training. Ours is a strong and progressive art, capable of standing on its own feet and of developing its own ideals, its own practitioners and its own training. The glamor of French artistic pre-eminence, real as that pre-eminence has been and still is in many fields, has tended, in the judgment of many to keep our art too long in leading strings, and—especially in architecture—to hamper free and normal development along the lines of American thought and taste. As a result much of our architecture, even when excellently planned and admirably and scientifically constructed, masquerades in a dress essentially foreign and exotic. It seems to me high time to break these leading-strings, and to develop our architecture, as our engineers have developed their engineering, independently of any foreign practice or foreign fashions.

*Fourthly*, for such Americans as can afford to devote three or four years to further professional studies, after graduating from a first-class American school of architecture, two years of Parisian

*atelier* work on advanced problems followed by one or two years of European travel and study—including if possible a full year in Italy or in Italy and Greece—provide a far broader, safer and more profitable discipline than the same length of time devoted to study in the Ecole, whether for the *diplôme* or not, with merely incidental short sight-seeing and sketching trips between the problems. In two years, perhaps even in one, an American graduate can get all that is best worth while in the Parisian training—its *camaraderie*, its artistic spirit, its environment, the French point of view—without being carried away by the fictitious and misleading affectation of artistic seriousness which in time seduces the judgment of the most sensible American and makes him believe that the continued solution of French Ecole problems is the one only path to architectural salvation and the hope of future glory. It is a pleasant infatuation, from which it takes years to recover; but it is an infatuation contrary to reason, for it elevates the atelier problem into a rank as discipline for American architects superior to the discipline of actual struggle with American problems under American conditions. All that is fundamental, the ground-conceptions of art and logic that underlie the best French teaching, an intelligent American graduate ought to master in a year's work in the atelier. It is in my judgment a sad waste of time and strength for American graduates to spend the better part of a year in trying to "make" the Ecole, reviewing elementary subjects in which they were examined four or five years ago; and then spending precious months on "analytiques" and order-problems such as they have already had their fill of in the early years of their American schooling; at last, at the end of two or three years "making" the First Class, to begin on problems like those of their fourth year at the home school; and finally returning with their precious *diplômes* to begin office work nine or ten years from the time they first entered on their architectural studies. The fruit is hardly worth the cost of its raising; *le jeu ne vaut pas la chandelle*.

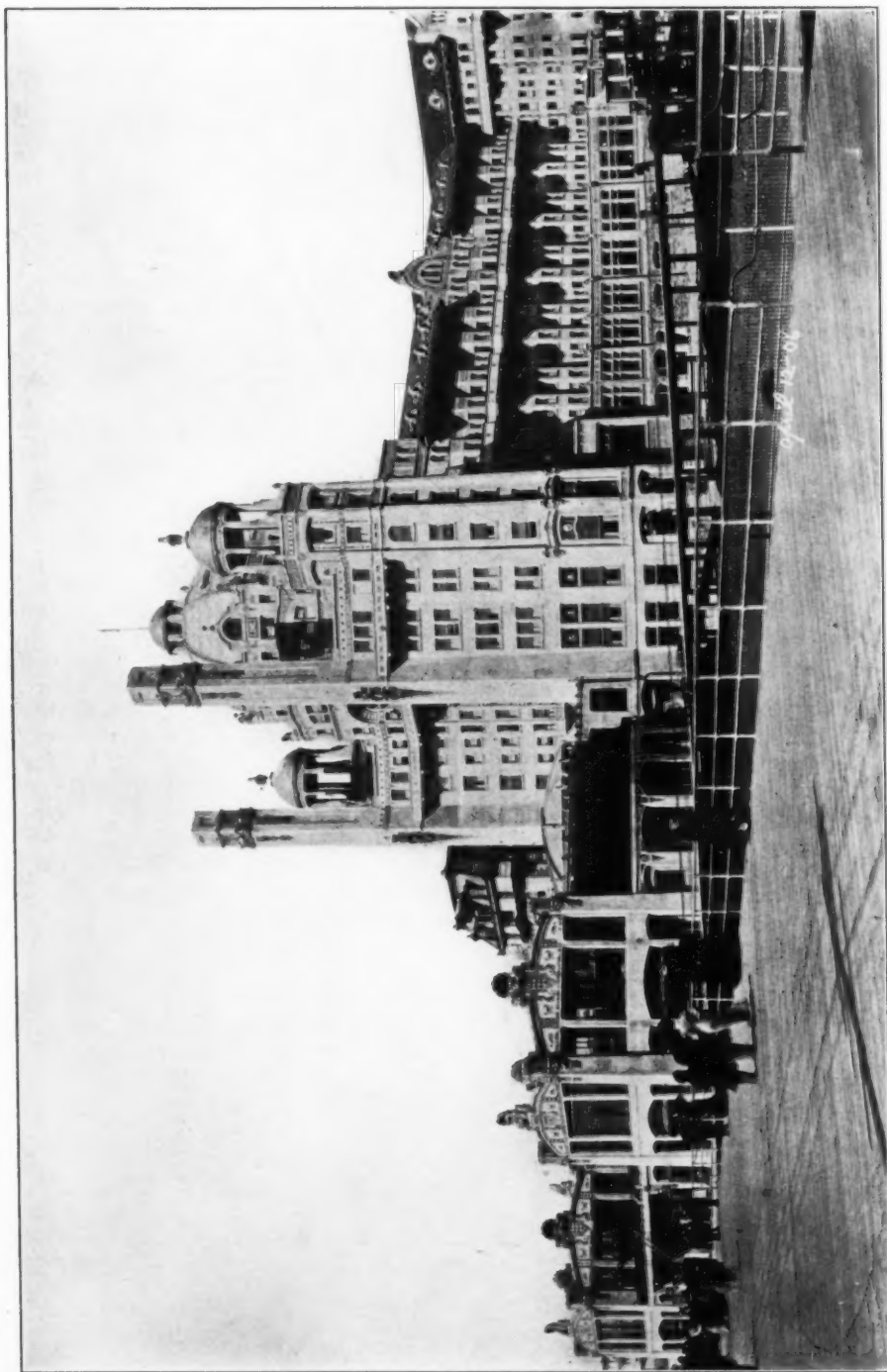


Nay, I would go further. I would even question at the outset the necessity or wisdom of going to Paris at all to study, except as a part of a scheme of travel-study covering all the great architectural centers. If the student must enter an atelier, let him do it for the purpose of broadening his culture by a year's work under foreign masters and according to foreign methods. Then let him go to Rome and Northern Italy, the centers from which, in the early middle ages and again in the Renaissance, flowed the streams of influence which helped make the great architecture of Western Europe. Let him visit Constantinople and see for himself the grandest interior ever erected for religious worship. Let him visit the Mediterranean countries, and the great medieval cathedrals, or study the work of modern architects in Germany and England. A year thus spent after a year in Paris—two years in all—would furnish a splendid education of the greatest possible artistic and cultural value, broadening and not narrowing, as the French atelier training too often proves, and at less than half the cost, in time, of the five or six years' grind for the *diplôme*. I believe if all our young graduates would follow such a program our national architecture would rapidly develop a freshness, a freedom, a self-reliance and boldness of style and expression which it now greatly lacks, and which dependence on Parisian models and training can never give it.

I have written this with full and grate-

ful realization of the great debt we owe to the Ecole; with full appreciation of the excellence of its methods, of its high ideals, and of its admirable performance. The minor fads which prevail in it from time to time, the recipes and formulae of this or that atelier, "spinning processes" and infallible systems for solving all problems, these do not disturb my admiration for its splendid achievements and for what is sound and true in its traditions and its ideals. They are only the froth upon its deeper currents. But I believe we have outgrown our dependence upon it, and that with our present civilization, culture and educational resources, we shall present an astonishing spectacle to the world if we continue to send every year scores of graduate students to lay on the Ecole shrine the offering of four or five of their best years. The tide that once rolled from America to the German universities has dwindled to almost nothing. I foresee a day in the near future when American graduates in architecture will cease frequenting the courts and halls of the Paris Ecole. Nay, I dare to forecast the coming of a day in the future, not too far distant, when French students will come to America to study architecture, seeking fresh inspiration, a new point of view, a new enthusiasm, in the study of an architecture as verile, as fresh and independent in its ideas as the American people itself. The sooner we emancipate our art from dependence upon Paris the sooner will that day come.

A. D. F. Hamlin.



Atlantic City, N. J.

THE MARLBOROUGH-BLENHEIM HOTEL.

Price & McLanahan, Architects.

# Architectural Expression in a New Material

## Practical and Ethical Problems of Design in Reinforced Concrete

The principle of reinforcement by means of steel rods, wire mesh or light bars in truss form has given to concrete a leading place among structural materials. It marks a departure in many essentials from traditional construction, and therefore must exert a like influence upon design. For this reason it has become a subject of absorbing interest in the architectural world, as it presents new problems not only of structure, but also of ornamental and, possibly, even of stylistic expression. The many practical advantages of concrete and the increasing scarcity of lumber assure it a prominent place in the architecture of the future.

Quite a little work which has already been produced is suggestive of appropriate treatment of form and surface. Still, the bulk of concrete building so far has been on purely commercial or engineering lines. We are as yet feeling our way on the outskirts of a new field of design.

The questions that arise as to the proper range and limitations in expression of structural concrete and surmise as to the lines of development likely to be adopted divide themselves into somewhat the following lines of thought:

*First.*—The characteristics of the constructive system and qualities of the material and wherein these are distinctly at variance with present-day or traditional form in current use; which form was created in other materials and systems of stability. Deductions, following of necessity, as to artistic and consistent expression in logical accord with constructive meanings and not inappropriately imitative.

*Second.*—Physical and mechanical details and economics of construction must be considered as they may bear upon the practical carrying into effect of the ideas which the logic of architectural expression leads us to attempt. Such matters,

for instance, as the various surface textures to be obtained by different methods of finishing and by choice of aggregates, limitations of form work and other points of relative ease or difficulty of execution.

*Third.*—Study of the subject on such lines as above will reveal the essentials of concrete, in contrast to other materials and the traditional forms of architecture. But when we have arrived at this point we will know more of what *not* to do than of what to do. Having determined what to avoid, we will find the gate is opened upon original opportunities of surface treatment, as the incrustation of tile, contrast of plain surface with color ornament and wrought metal; motives of delightful promise, and in which some successful work has already been accomplished. But, bound as our design conceptions necessarily are to forms and details handed down to us and expressive for the most part of the constructive meanings of other materials than concrete; and, in view of the fact that this new construction is being introduced for buildings of varied character and great size, some interesting issues arise as to rational design and composition. A style that has marked individuality rather than adaptability may be ill suited to the wide variation of motives existing between different classes of modern buildings. Those of small scale and simple composition present a problem of comparatively plain and harmonious solution. More complex structure, on the other hand, introduces decidedly more intricate questions of design ethics. The wall and roof motive of a two-story country dwelling is a problem much more suggestive of artistic solution than a pier and girder and curtain-wall construction on a large scale. The necessity for considerable compromise with classicism and the lan-

guage of masonry will probably be recognized if we are to achieve much dignity of design with the latter variety of building. We will also probably conclude that the best progress will be made by slow development rather than by revolutionary measures.

#### THE LOGIC OF CONCRETE.

Concrete is by no means a new building material, but not until recently did it occupy any but a secondary position. The Romans were the most notable users of this material, though entirely as a useful substitute for more costly masonry or as a material for rough walls which would be faced with stone or brick. The articulations natural to the latter materials would therefore be expressed: the concrete was merely a backing.

Stucco was sometimes used as a finish for walls. This had been a quite frequent method in still earlier times, and was again later, in the Italian Renaissance, when architectural masonry detail was much imitated in this medium. The same thing is done very frequently today.

In stucco over brick or rubble masonry (which is a rough concrete) the primary motives of concrete may be suggested but not fully expressed. The building is not entirely monolithic, though it often approaches this, in impression more than reality. Its walls, at least, are single masses instead of being made up of cut and jointed small units. Except, however, for dead weight support, the constructive office of concrete is not expressed. Therefore the meaning of lintels, arches and of all members detached from the mass is not of concrete, but of stone or wood. Even though these are superficially in cement, they retain the forms of the other materials in which they were originally created, because the actual construction is still upon the principles of those materials. However, the suggestive treatment of stuccoed walls and the imitations of architectural forms in plastic cement or stucco furnish an introduction to the motives of structural concrete, architecturally considered. It is

the intermediate phase between the latter and the architecture of small jointed units built up on the static principles of column and lintel or arch.

In recent years a large number of well-designed country houses have been executed in stucco laid over wire lath or brick. Frequently merely the wall surfaces are stuccoed; features, such as columns, cornices, eaves, being in wood, stone or brick, as the case may be. In other examples, architectural members and ornaments have been cast in cement; the composition and detail in such designs is, however, invariably masonry architecture executed in a substitute material. It must, at the same time, be admitted that there is more certainty of producing beauty of form by this means than by relying upon our present inexperience for a more logical expression of the material. But this is anticipating our arguments. The truth of what has been said just above is evident in the examples which have been selected for illustration as typical of present design that makes use of stucco surface, but otherwise follows conventional construction and architecture. The cottage shown in the first illustration possesses the simplicity, the plastic suggestiveness of a genuine concrete building, having roof and minor accessories in wood. The large house at Roslyn, L. I., reveals a composition of much beauty and academic feeling. The walls are brick, covered with stucco; the architectural features are cast in cement; the terrace wall is concrete, cement faced in forms. The design, however, is entirely conceived in terms of stone; cement and stucco have been adopted as a substitute, evidently, not from choice.

The stucco building, when it can break away from being a replica of stonework executed in a cheaper material, tends to develop a plasticity of treatment, a monolithic breadth and surface texture of its own. There is little distinction, as a matter of design, between plastering mortar on walls of brick, clay blocks or concrete, if the latter is not part of a reinforced monolith. A solid concrete wall is scarcely more than a form of rubble masonry,





AN EXAMPLE OF STUCCO ON WIRE LATH—RESIDENCE AT GLENS FALLS, N. Y.  
(By courtesy of Atlas Portland Cement Company.)

but one which the fineness of the aggregate makes it easier to render with a presentable surface. But the development of concrete construction has advanced considerably beyond this.

Several methods are now in vogue in which concrete is used, with greater or less completeness, as the structural material. First, there is the above-described stucco on brick or on metal lath over frame. This cannot be classed as concrete architecture, except in so far as it implies some of the same motives to a limited degree, having superficially the plasticity of cement. It is often attractive, but is contradictory, and therefore must borrow and imitate whenever the simple value of surface seems insufficient and form is indulged in.

Then we have concrete block construction, but this method possesses even less of the real characteristics of concrete. It is, in fact, purely a work in artificial stone. Very few attempts have been made to treat concrete blocks with any artistic sense; when it has been done, however, using large blocks finished to closely imitate real stone and designing all features just as for stone, it has been shown to be not without scope. However, it is unproductive of new thought in design, beyond the matter of finish to imitate something else.

Lastly, we have genuine concrete construction. The French first developed the system of *ciment armé*. Ten years ago they were building structures of considerable size of concrete, in which were embedded iron rods or mesh, so disposed in walls, girders and other structural members as to supply the tensile strength that concrete lacks. Since then this principle has been worked out with great precision of detail, both scientifically and commercially. Though the science is still young, it is practical to apply it to the entire frame of a building—columns, piers, roof, girders and beams, as well as walls.

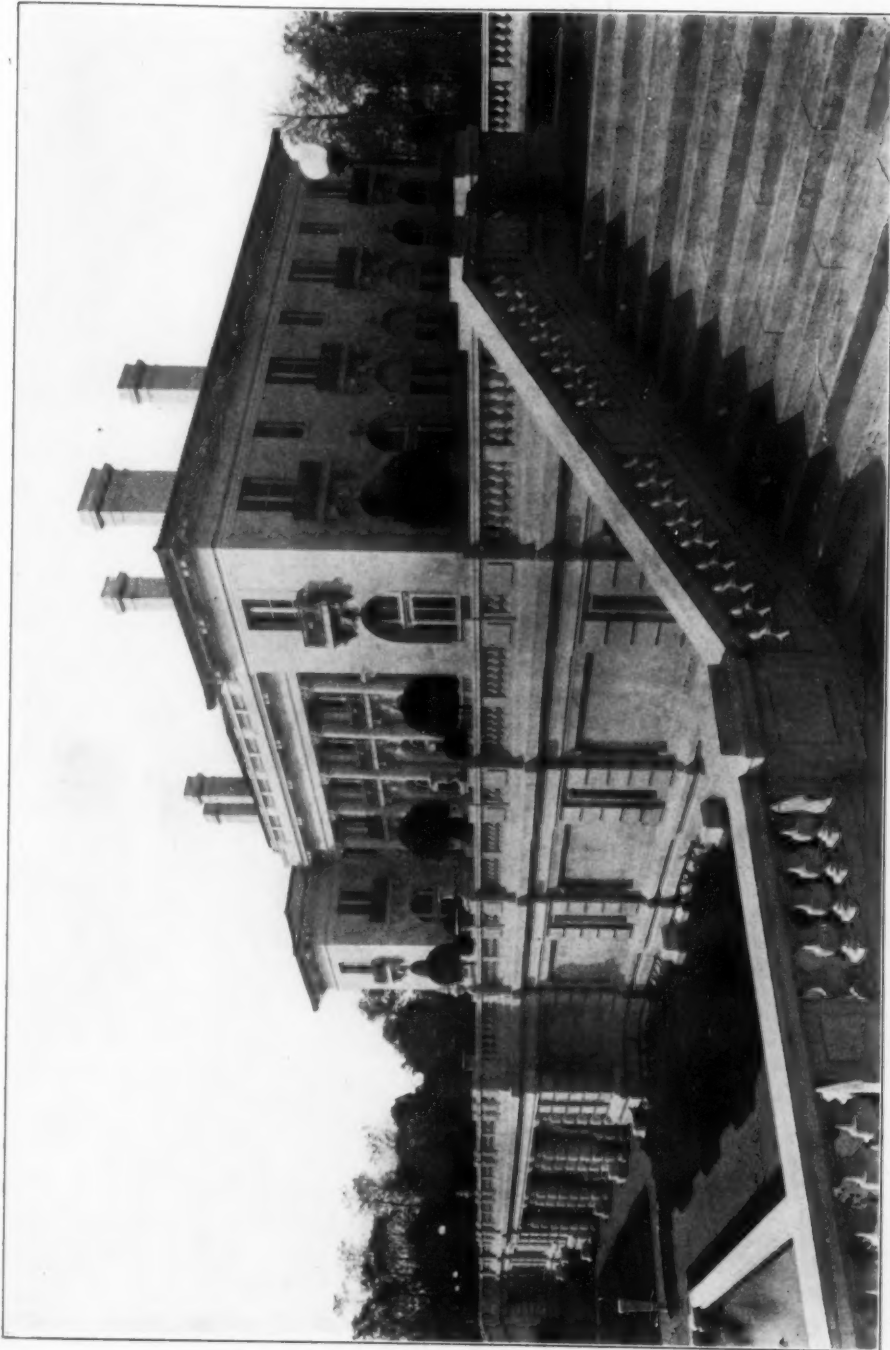
One thing is at once strikingly apparent, namely, the much greater slenderness of the construction as compared to masonry. Walls may be thinner and spans of girders longer than we are used to seeing. Steel frame construction has,

to be sure, accustomed us to much of this, particularly as to slender verticals. But this is quite a reversal of the usual conception of concrete, as massive and inert, which it is to be sure when used alone. So concrete must be considered from now on as a material with essentially new functions and possibilities of expression.

First of its characteristics as an architectural material is its *plasticity*. Technical language adopts the term "pouring into the forms," which concisely implies the impressionable nature of the medium, while it describes the actual method of emplacement. Such material calls naturally for moulded, flowing forms growing out of the body material, in contrast to the principle of detachment of forms and the putting together of them in small units, which ideas govern architectural construction and ornament in stone.

Concrete structure is not merely plastic and lending itself to treatment in large masses; it is *monolithic*. This is the second characteristic of general import, carrying with it the distinction we have just noted. The indication of joints is of course illogical, because such would be merely a pretense of what does not actually exist.

Furthermore, in dealing logically with concrete we must revise many of our most deeply seated notions regarding stability. Two motives are fundamentally concerned with all architecture: the one is the pier or column and lintel, the other the arch, with its inferences of thrusts and balanced equipoise. Concrete, to be sure, does not suppress these elements of construction, but functional relations of the component parts are altered by the fact that not only are the base, shaft and cap fused in one, but the lintel or the arch itself becomes practically one uniform mass with the pier by virtue of the interwoven reinforcement. In consequence, the meaning of many of the members of the conventional order, which has maintained its integrity from the days of Athens to our own, disappears in monolithic construction. The capital may remain, at least in the abstract; some indication be-



MASONRY MOTIVES RENDERED IN STUCCO—W. L. STOW RESIDENCE.

John Russell Pope, Architect.

Roslyn, L. I.

ing announced of weight concentrated and supported. And the capital is always a spot proper to emphasize by the use of some ornament. Architrave and frieze have no separate identity, though, if the expression of monolithic form is rightly interpreted. A projecting cornice, of course, has perfect reason; in the mouldings that should compose it, however, modillions or brackets have no logical place. A concrete arch, not being composed of voussoirs and key block, should not present a pretense of them by indicating imaginary joints. A chamfer moulding is about the extent of articulation which should be allowed, though the crown may be chosen with propriety as a place for enrichment, if this is wanted for its value in a scheme of ornament and if the convention of a wedged and functional key is avoided.

There is a novel slenderness and great beauty of line in the arched forms to which reinforced concrete may be adapted, particularly in bridge work. In general construction the tendency is to long spans and segmental or elliptical sections. It may be observed, in speaking of the arch, that the fundamental distinction between arch and beam or lintel has really disappeared. Spanning an opening horizontally does not necessarily imply the principle of the beam, since we may have an arch of keyed stones with a flat soffit. The distinction arises in whether the member is a single unit of material or several units with radiating joints and, as a consequence, requiring of its supports either a passive vertical resistance or one which must also meet an outward thrust. With reinforced concrete all horizontal spans are the same in constructive system and, for that matter, the only principle of importance that differentiates a curved form of span from a beam is that of the strain line for the particular loads, which, in turn, determines the curve of the arch, if it is to be other than semi-circular, and the necessary dimensions of an abutment. But such an arch may be more accurately defined as a curved truss; therefore the arch, as understood in masonry, does not exist in reinforced concrete.

Arched or domed roofs and various forms of vaulting are practical possibilities of reinforced concrete, though the occasions that permit of ceilings of such character and in durable materials are rare.

It will be seen from these tendencies that logical form, as it may be expressed architecturally in concrete, makes for severity and simplicity. In all former styles the emphasis of joint lines has been a favorite mode of expression. In this new material plain surface must be mostly depended upon. Conventional form, as it has been handed down to us, is permeated with the feeling of the cutter's tools. One sees this in the straight lines and sharpness of mouldings and in clear-cut carving. Concrete ornament should show evidences of modeling rather than sculpturesque quality. Line has diminished in importance, surface and color have gained. Mechanically, as well as aesthetically, the elaborate forms of stone architecture, heavily projected and accurately finished, are contrary to the nature of concrete and the methods used in its erection.

Since so much that has seemed positively essential to design, at least for all large problems where formal elaboration is called for, is denied the concrete designer he must evidently either veneer the structure with other materials in the same unrelated manner as is done with a steel frame, or must seek other sources of inspiration. A motive prolific in opportunities is offered in the use of faience and tile. Pattern is the natural form of enrichment for flat surface, and nothing is more consistently in harmony with the unmechanic and plastic, though durable, surface of concrete than ceramic tile and faience. The tile may be modeled in low relief, or, again, may be mosaic inlays of colored marbles or terra cottas in geometric patterns. The quality of the concrete surface permits an expression of the hand-made rather than of the mechanically finished.

Some ideas which have already been developed along the lines of tile mosaic are shown in the accompanying illustrations. Attention is particularly called to the all-concrete house at South Orange,





REINFORCED CONCRETE—RESIDENCE AT JAMAICA, B. W. I.  
(By courtesy of Atlas Portland Cement Company.)

which will be referred to again. A house on the island of Jamaica, a photograph of which is also given, leans rather more to derived architectural form, but is appropriately designed for its setting, and, except perhaps in the colonnade, is a logical statement of concrete form.

or veneering with thin slabs or tiles in appropriate motives are destined to be leading characteristics of concrete design. Recognized laws of ornament and style will determine the relative value of location and distribution or concentration; capitals, pilaster panels, spandrels,



ENTRANCE TO THE PONCE DE LEON.

St. Augustine, Fla.

Carrère & Hastings, Architects.

(Copyright by H. C. White Co.)

Color, of course, may be indulged in without stint. To be sure, it is rather fearful to think what may be in store for us in the way of chromatic outbursts should the speculative suburban builder turn his attention to this subject. In any event, polychromy and incrustation

tympana of arches are natural points for accent. As a general rule, such enrichment is more effective when highly concentrated upon certain central motives of a design and allowed to contrast with expanses of plain surface. One of the limitations of decoration of this type is

that it inclines to smallness of scale; thus suggesting its better adaptability to the refinements of a small edifice than to the monumental proportions of a building in the grand manner of the Italian or French tradition. In other words, it is more properly decoration than architecture in a monumental sense.

Fenestration assumes an important place in concrete design. In many compositions there will be an obvious opportunity to strike a contrasting note to plain wall surface by the introduction of richly ornamented metal frames and mullions or sinuous tracery, if the latter would be in harmony with other motives or style used. Wrought-iron balconies, gateways, lanterns will be valuable accessories. We believe, too, that hammered copper for certain purposes, such as copings and cornices, may be used not irrationally and certainly with beauty of effect. Of course, where metal is so applied it should be acknowledged and its characteristics emphasized, not disguised.

When a timber roof is used, eaves and carved wooden brackets can be made of value. The typical treatment for an all-concrete roof is a covering of flat handmade tile, laid with wide, and, if desired, irregular mortar joints. As such tile can be made in soft and beautiful tones nothing could be finer and pleasingly unmechanical, particularly for domestic work.

The finish and texture and tone of concrete surfaces may be varied according to what seems best to harmonize with the character of particular buildings and designs, as will be referred to more at length presently.

Such are some of the motives, full of imaginative promise, that are open to concrete and that should prove, in the problem of the small building, at any rate, an adequate compensation for the forced abstinence from the architectural formalities we have become accustomed to, but which are phrased so entirely in the language of stone.

#### THE ECONOMICS OF CONCRETE.

The use of reinforced concrete in engineering works and for factory buildings has increased at an enormous rate

in the last few years. For suburban houses, garages and other small buildings it has also made fair progress. In the field of larger buildings the advance has been much slower. This has been due partly to architectural doubts and partly to uncertainty as to whether the practical advantages and cost saving might not be offset by greater disadvantages and limitations. We think the balance is swinging more and more in favor of concrete as a practical method of construction for an increasing variety of purposes. But, whether or not the tentative efforts that have been made up to date mark an experiment that will be abandoned before long, as far as large constructions and their architectural requirements are concerned, will depend ultimately upon economic questions. The most constant and obtrusive objection is in the expense and difficulty of form work where a design departs from plain surfaces and does not permit of much repetition of the same units. This will no doubt enforce upon concrete design a confinement to very simple treatment, except in so far as it may combine other materials with itself to supplement these restrictions.

The economic advantages which pertain to reinforced concrete are based upon the scientific use of concrete and steel, so united in a section as to obtain the greatest benefit from each. Steel is vastly more expensive per pound or ton than concrete; but, on the other hand, its unit of tensile stress is 16,000 pounds per square inch against about 50 pounds for concrete. Therefore it is the most economical material for tension and sheer members; while concrete, on the other hand, may be used with greater economy for compression, as its ratio to steel, as to compressive strength, is only about one to thirty. Reinforced concrete is designed upon this principle, and it will readily be seen, even from a rudimentary statement of the matter, why this system has gained ground rapidly where the question of relative cost is foremost and the construction simple. In the factory class of buildings it has been proved to be but a small percentage more costly, in some cases even, it is

claimed that it costs less than brick walls and "mill construction" floors of heavy timber. Also it possesses advantages of heavy load capacity, fire resistance and freedom from vibration that more than offset the slightly increased outlay.

For such reasons it would seem to be merely a matter of a little more familiarity, standardization of formulæ and demonstration of reliability and system in execution to assure a much more widespread popularity, which will embrace buildings of miscellaneous character. No system of construction promises a greater degree of permanence. For a certain class of buildings this is not an advantage, since this construction cannot be taken down or altered with ease, as can be done with buildings put together in the usual manner.

The system adapts itself either to self-supporting walls or curtain walls carried by girders at each story, their load, in turn, transmitted to columns—the method of the steel frame, with the difference that we do not necessarily have to protect the members of the skeleton with brick, tile and stone. The necessary covering of the metal tension bars is done with one to three inches of concrete below or outside them, as the case may be.

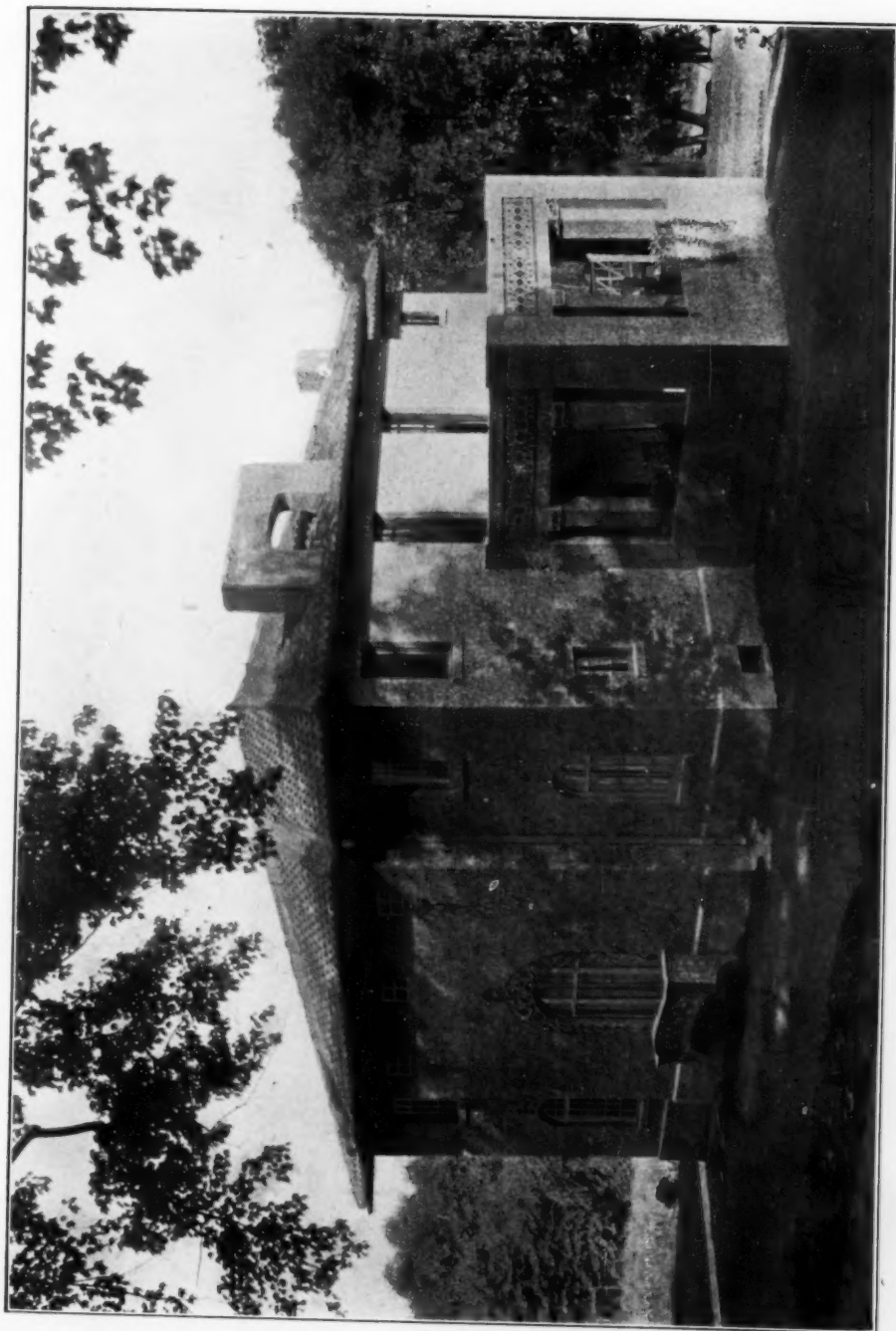
As to exterior treatment, some sort of surface finish must be given. Further elaboration of detail depends so entirely upon the type of building that comparison in cost could only be made in each case; but, as a general proposition, the architectural enrichment of a concrete façade should cost no more than one in brick, stone and terra cotta of a corresponding indulgence in design phrases and attainment of architectural effect. Besides, it is a perfectly simple matter to face an exterior, or as much of it as we wish, with a veneer of masonry, concrete in such case simply taking the place of the usual fireproof steel frame. Such a method does not advance architectural design in concrete, but it has been seized upon as a practical and easy solution of the dilemma.

The question, economically, lies principally in the relative costs of the two systems as constructive framework. The

fewer the elements of plan and section, the more constant the repetition of unit dimensions, the less will be the expense of concrete, owing to the simplification of form work and rapidity of erection. The point which commands attention is that reinforced concrete is adaptable, constructively, to present commercial requirements for all but some extreme types of buildings, and possesses some primary advantages in the question of cost. To offset this, stand the difficulties incidental to form work. Also, the fact that concrete work cannot be pushed in freezing weather may often be a serious drawback. The science is as yet in a somewhat experimental stage. A calamitous series of failures, due to carelessness or ignorance, has induced conservatism. The greatest care and vigilance of superintendence is necessary. Absolute regularity in proportioning the ingredients, placing the reinforcement, and in other details of execution must be observed, for such errors are quickly hidden and are difficult of correction if detected. The mixing and pouring of concrete requires the minimum of skill, but the maximum of care. Therefore every building in this construction should be superintended as systematically as the most important work of engineering. But with this responsibility realized and accepted and reliability proved, a great obstacle to the use of concrete in important buildings will have been removed. Large building operations, in these days of close figuring of investment return must adhere closely to methods that are precise and certain in results as to cost, time of erection and practicability of all details. Efficient system, certainty and uniformity in meeting customary requirements can only be arrived at gradually by a new constructive system. Examples of a great variety of types of building are, however, already to be found in different parts of the country.

The treatment of surface is one of the most important matters concerned with the architectural possibilities of concrete. As laid up with care, but purely for utility—a rather wet mixture, well tamped in forms of average regularity, being





RESIDENCE OF REINFORCED CONCRETE, WASHED SURFACE EXPOSING AGGREGATES IN THE MIXTURE; TILE-MOSAIC INCrustATION.

(By courtesy of Vulcanite Cement Company.)

Tracy & Swartwout, Architects.

used—a fairly smooth, but regular, surface results, a film of mortar settling against the sides of the mould. However, every irregularity and almost every joint of the boarding leaves an imprint. Patches of exposed aggregate show here

even texture and one agreeable to the eye. Two quite opposite effects may be had: one consists in brushing and washing away the cement skin, thus exposing particles of aggregate; in the other method a surface mixture of selected



DETAIL OF REINFORCED CONCRETE RESIDENCE AT SOUTH ORANGE, N. J.  
(By courtesy of Vulcanite Cement Company.)

and there and variations in color occur in streaks and layers. In short, such a surface is not merely dull and uninteresting, its inconsequent irregularities are objectionable. Several methods are in vogue aiming at the production of an

material is applied to the face of the moulds, just ahead of the pouring of the concrete, and, on removal of the forms, the surface may be further finished by washing or tooling.

The first of these methods frankly ad-

mits and displays the material as concrete. Some very delightful and varied effects may be obtained by using aggregate of graded sizes and mixing in a certain proportion of pebbles, marble screenings, burned clay or broken brick, flecks of color thus giving an animated texture to the otherwise leaden and lifeless material. Brushing may be done to greater or less depth, giving a more or less roughened surface, as desired. It is necessary to brush and wash the surface while the concrete is still green, as otherwise the process would be too laborious, in fact, would be precluded. Therefore the forms must be removed at about twenty-four hours after placing the concrete. The necessity of removing the form work before the concrete has thoroughly hardened considerably limits the practicability of this process. Load-sustaining sections must be hard before the supporting mould is removed from underneath. Though, where this effect, rather than a smoother finish, is wanted, it should be quite possible to attain it in a measure, even when the concrete is quite hard, by the use of acid and the stone bush hammer. Sufficient of the mortar skin could be removed to obliterate the impression of board veinings and layer marks, and at the same time expose some of the aggregates. After this tool dressing the wall should be brushed down with dilute acid, followed by water played on by a hose to prevent the acid from penetrating. Limestone is barred where acid cleaning is done.

The brush-wash manner produces decidedly the most legitimate surface, the only proper finish, it might even be said, where consistent concrete design and ornament is carried out. As a matter of fact, the method is best suited, for practical reasons, to buildings of small dimensions, and artistically, to those of simple wall composition. This finish was successfully rendered in the interesting house at South Orange, N. J., shown in the illustrations, though the photographs fail to reproduce the color quality.

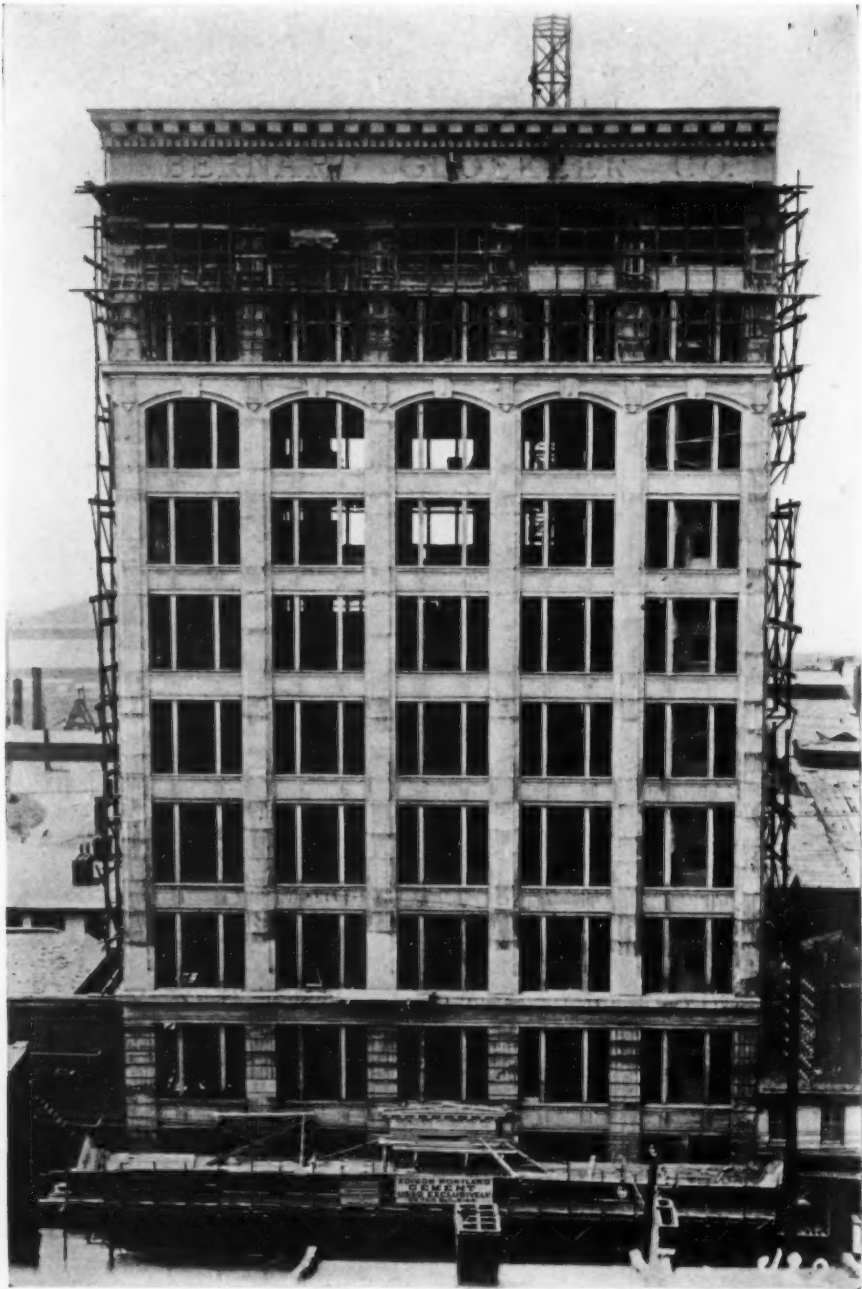
In the present transitional period, and quite possibly beyond it, a smoother tex-

ture, more nearly that of cut stone, will be considered more desirable for many purposes. Such a finish is arrived at by the method known as *mortar facing*, though it is by no means limited to mortar of the ordinary variety. The most primitive fashion of applying is to trowel on a mortar against the face of the form about an inch thick and for the height of the layer about to be laid and to fill in behind and at once with the ordinary concrete, which, of course, firmly unites with it as the mortar is still soft. An improvement insuring greater accuracy is to form a slot by means of a sheet-iron plate specially devised for the purpose, with angles to hold it vertically at a desired distance from the face of the forms. The prepared concrete for the facing is first filled into the slot and immediately afterward the backing is poured and tamped down. Then the plate is raised, allowing the two to be firmly bonded together by ramming. When the forms are removed the facing will require dressing and cleaning down, as, even though the boards have been covered with oil and soap, the soft material will take the impression of grain and joints and efflorescence may break out in spots. A great variety of texture, and of color as well, may, of course, be achieved according to the aggregates selected: glistening marble, gray trap rock, yellow sand and brick dust.

A cheaper method, but one not to be recommended, since more permanent finish is possible, consists in applying a skim coat of mortar to the surface after the building is erected and forms have been removed.

The two principal methods above described, respectively that of outspoken concrete, aggregates showing in relief, and the surfaced—finish, displaying an even, fine texture closely resembling that of cut stone, though it may be coarser, are destined, we think, to characterize two schools of design. Each is in its way legitimate, because in harmony with its own set of ideas and adaptable to widely separated classes of buildings.

As reverse forms must be made for all mouldings and projecting sections, and



THE GLOEKER BUILDING.

Office building type, showing dependence of design upon masonry conventions.  
Pittsburgh, Pa.

(Photo by courtesy of The Cement Age.)



as economical erection is out of the question where these variations are frequent and complicated, it will be understood why this least expensive and most commonplace form of enrichment for stone and wood becomes, with concrete, a costly and troublesome one. The difficulty of mouldings is therefore out of proportion to the effect gained if we can find a better employment for our efforts in direct and suitable form of expression. At the same time, mouldings cannot be entirely dispensed with, and if simple and of large profile, but not too massive in projection, may come within the reasonable scope of practice. Abrupt projections, as of balconies, are consistent in a material with notable cantilever propensities.

It is simple, on the contrary, to leave recesses in the forms in which blocks of other material may later be inserted. Concrete being so restricted in respect to mouldings, it would appear rational to introduce other materials for occasional emphasis of this kind where line and shadow value may thus be given, which would otherwise be lacking from the design, such materials, of course, to be acknowledged without disguise. A programme, for instance, that offers little opportunity for relief of a monotonous façade by a fine roof or any other feature of projection from the flatness of the wall plane, might make effective use of copper for a rich cornice and parapet, the same material, or bronze, being repeated in the other details as the composition may suggest, so as to carry a thread of the motive through the design. Or, again, marble could be used for a more architectonic phrasing of the centres of interest: an elaborate entrance, moulded column bases, window frames to distinguish the main story, etc. Still more fitting for such purpose, it may be thought, is moulded terra cotta. Yet, as cast to resemble and substitute for stone mouldings and carvings, it is, aesthetically speaking, wrong. In the same category of errors is the casting of large cornices, balustrades or such matters, copied after stone, in concrete poured into sand moulds and afterwards secured in place. As to terra cotta,

however, when designed to bring out its own virtues and proper expression, great opportunities exist for harmonious combinations with concrete.

We have not progressed far enough as yet with reinforced concrete for such motives to be carried out in practice with the routine accuracy of the prevalent modes of construction. There are innumerable details in a modern building, all of which must be determined on paper alone with completeness and certitude, and the execution of which must be marked with equal precision. The handling of a building operation is required to be first of all on a strictly commercial basis. Only after the accumulation of much experience, therefore, may we expect, for practical reasons alone, to see concrete design attain half the measure of its possibilities, and up to the present time it has been mostly confined to architectural problems of simple character and engineering ones of comparatively little complication, such as factories. However, it is pushing out gradually into larger fields.

#### CONCRETE ETHICS IN RELATION TO PRESENT ENVIRONMENT.

Concrete, it would appear, should certainly provide the long-hoped for medium for creative design, untrammelled by convention, as, on the contrary, all work must be which is confined to materials that have been so exhaustively worked over. Yet it cannot be said that many designs of pronounced beauty have as yet been executed. It must be remembered that progress in style formation is evolutionary. Evolution, as we know, never goes by leaps and bounds. Even when there is some radical change in thought or habit, external form will only conform by gradual elimination. A new material, revolutionary in certain constructive principles, must in the end produce a complete system of design, a pronounced architectural style. However, such a development may take a long time. Especially in this present age, conception must wait on practicability and economy. The effective range of conceptive design is limited by the external and positive influences that de-



termine structural development and architectural preferences at large. In other words, this problem should be considered not merely in the light of its own logic, but with the realization that results may only be arrived at in terms of present needs and appreciations.

Thus we may have convinced ourselves of the correctness of the thesis, namely, that the conventional form handed down to us in the motives of articulated stone and timber architecture should be abandoned, root and branch, because entirely without relation to monolithic construction; yet further consideration may convince us that too much radicalism is barren of good results and that we cannot break too suddenly with established ideas. The instinct of design must be relied upon chiefly to discover the most promising roads to travel. However, in such a matter knowledge of conditions assists and gives precision to instinctive feeling.

It is a first principle of architectural expression that its form should articulate structure; should be externally in harmony with the real construction, expressing, not contradicting, it. Yet we know that this theory must be compromised with in all typically modern constructions. It cannot be adhered to nowadays with the literalness of the days of simple masonry and timber building.

In small structures of two or three stories, residences mostly, we are still fortunate in having a simple problem in this respect, but seldom in any other class of building. It is not only the skyscraper that is of skeleton construction, but churches, theatres, imposing hotels and apartment houses are, most of them, of the same type.

Modern conditions, then, compel some modifications of the simple law of the harmony of design. While architecture will achieve its happiest results through following the line of least resistance offered by construction, there should be the understanding that, though it may not contradict the construction in an irrational or unnecessary manner, it may supplant the actual by an illusion of such structural form as is in accord with and in completion of, in an architectural

sense, the true but bald engineering fact. To explain by definite citation: The actual frame of a Gothic church or a fifteenth-century Florentine palace, to name random examples, is such that a work of art was possible through the agency of design that beautified while revealing the construction with entire frankness and no disguise. Such quality, however, is lacking from the skeleton method which dominates modern architecture. A twenty-five story building, with a steel frame of equidistant verticals and horizontal members, encased merely in the minimum of practical masonry and without pretense of any further constructive system than the naked truth, is a monstrosity and a public offense. And yet many buildings of this size and class in no way offend or oppress us by overbearing ugliness, and, at the same time, their usefulness is in no wise diminished, all because their façades have been given some composition and proportion of form that satisfy the needs of eye and imagination. Of course the accent given to certain stories or other divisions or features whereby a design is achieved is not a reflection of any corresponding variation in the real construction and little or none of relative plan values. Nor have the attached pilasters, arches and other such matters any meaning above that of pure fiction; it is beyond doubt all make-believe. It is foolish, though, to condemn such a process of design, under the circumstances, provided the apparent construction as presented in the design is rational and consistent, its special accents always such as convey impressions of a construction that might logically be developed and similarly accented if the walls *were* solid, or at least had greater reality than that of a protective curtain. However, we accept this anomaly so we should find no fault with the illusion, merely as such, but only when it ceases to be an illusion of things real, of consistent meaning and of artistic value.

While it is particularly to masonry veneered steel construction that these questions of architectural virtue are pertinent, reinforced concrete design cannot consider itself free from the neces-

sity of compromise with them. The same commercial system is at work demanding a reduction of the constructive composition to the simplest form of skeleton consistent with the plan desired. The vogue of reinforced concrete has so far been mostly a commercial one, and has been influenced largely by the great bearing strength possessed by the system in light sections and long spans. As a consequence, the skeleton frame in concrete offers no greater body of material, and sometimes less, than the steel frame after the latter is encased in its fireproofing. The same hopelessly monotonous repetition of units is apt to be determined by forces quite beyond the control of the designer. Therefore there will be the same necessity of inventing some supplementary composition if buildings of this major class are to be done architecturally in concrete.

True, the concrete building retains, in any case, a closer bond between appearance and reality, because, while the older type is a construction of two distinct materials without a natural co-ordination of function, the other is of one substance within and without. Supports, floors, walls, roof, it is all one mass; the surface and the constructive material are the same. Therefore a curtain wall is not so disunited from its framework, and such fictional expression as it may be inclined to indulge in need not and should not be as radical a departure from fact as conditions make desirable in the stone or brick and terra cotta clothing of gaunt and rigid frames of steel.

We need not, however, in one construction more than the other, consider ourselves forced, because of any virtue in absolute adherence to truth, to express outwardly the actual equality of each vertical member and floor line; the rudimentary features and monotony in all its horror. Grouping of stories or bays and the use of all the conventional architectural paraphernalia we may find of service, if modified in accord with the new material; all this is legitimate, whatever our material or constructive system. It is the necessary sort of thing if we are still anxious to produce architecture from the unpromising data of

column and girder framework. Therefore, we do not think it is reasonable to expect that we should abolish at one stroke all accepted conventions of form. Where, to retain them, would take us beyond the proper scope of our plastic medium let us fall back on the old materials, working out harmonious motives for their combination. This modified point of view will better sustain a properly ordered evolution which may eventually work out a closer harmony between construction and outward form. Architecture is full of small deceptions to cloak reality when this is crude and mechanical; though there should never be a line or bit of material without purpose and value in the expressive scheme of the design.

We should remember that the orders and other primary motives have, by their varied adaptability, become in a measure disassociated from their origins and from narrow restriction to those occasions where their actual and apparent functions are co-extensive. Architecture has for a long time used them largely as convenient symbols or notes of indication. The purist may say the indication is one only of decadence; not necessarily so when we consider that our problems lie in the conditions of to-day, not of yesterday.

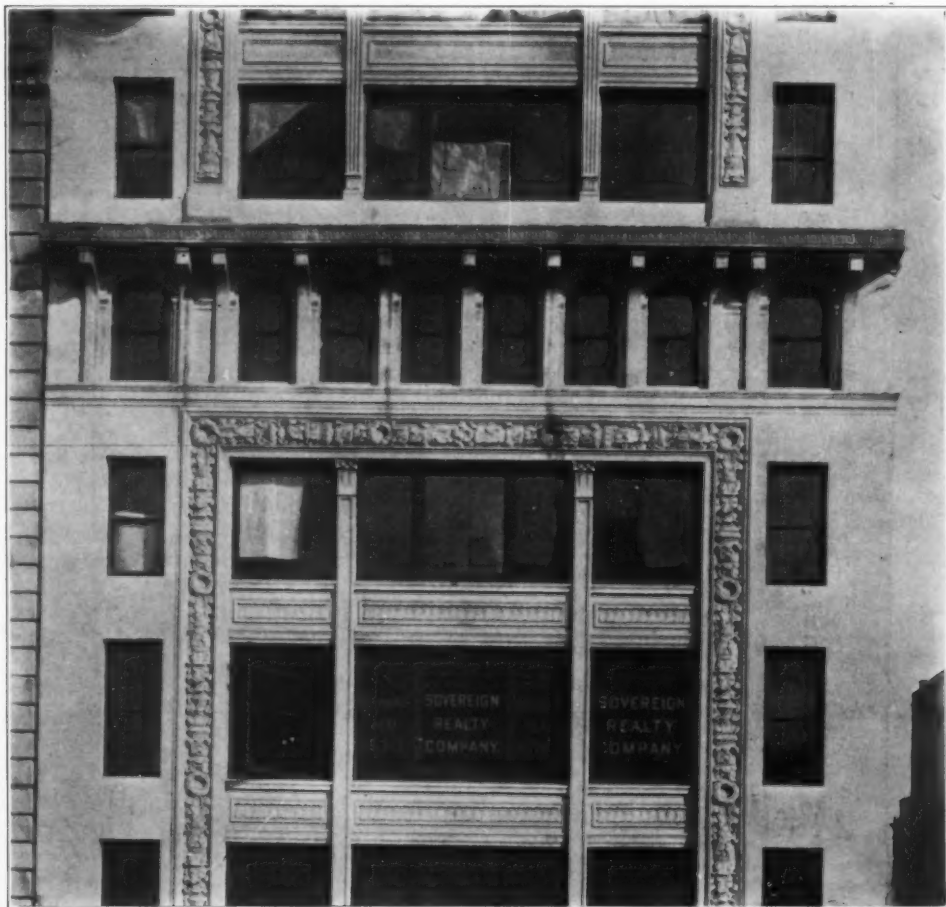
The characteristics of concrete make certain clear demands, which we attempted to define above, and it is clearly requisite that features of stone or timber be not imitated unless such quality as belongs distinctly to either of these materials and to them alone be extracted; or unless we compromise the matter and veneer a concrete shell with jointed masonry. Otherwise such proportions and profile must be used as will not give the impression of an inappropriate copy of forms that could be rationally constructed only of built-up and jointed pieces.

But we cannot get along entirely without columns and entablatures, attached orders and other familiar devices, if we are to give some architectural dignity to skeleton framed buildings of great area or height, whether the frame be a reinforced concrete monolith or of riveted steel sections. Therefore, we think that

we need not have false pride, but that, for an invasion of the domain of masonry design, we should use the smoother methods of finish that closely resemble the texture of dressed stone and in the form of design phrases invented for stone, provided they may be rendered practically in

considerations to other arguments in favor of the motives of incrustation and the use of architectural accents in other materials.

Such a course is better than a forced straining after originality. We should be satisfied if unnecessary imitation is



DETAIL OF THE MONOLITH BUILDING.

West 34th Street, New York.

(By courtesy of Architects' and Builders' Magazine.)

the material and if not, introducing stone, terra cotta, or metal with the evident purpose of meeting the requirements of decided and formal composition. As was pointed out above, the impracticability of elaborate form work forces simplicity of surface projections upon concrete, and, therefore, adds the weight of practical

avoided and if a little spontaneous thought and greater consistency of detail be suggested here and there. We should attempt then to so dissect and re-compose old formulae as to infuse some of the plasticity and monocast feeling of the material. There are opportunities enough for the genius of design to assert

itself in a gradual transmutation of style without having recourse abruptly to an absolute divorce from tradition. It is necessary though to divest ourselves of the conception of derived motives as complete and unchangeable. On the contrary, we should view them elementally so as to discern whatever is in them belonging to art at large and free from the necessary implications of any one material.

In some problems of monolithic building, it is quite obvious and we may say has already been demonstrated, that construction may be sufficiently and truthfully stated and the material frankly expressed, while quite in harmony with present appreciations of form. A few small houses of decided beauty and entire consistency as to the expression of the material have already been designed and more in greater variety of motive will surely follow. The structural make-up, however, is of the simplest. Low walls, a good roof, projecting wings and porches or recessed loggias provide material for a sufficient composition and study of proportion; for the rest, textural surface and a small amount of appropriate ornament is all that is wanted. The walls will usually be plain, but piers of slight projection giving an arrangement of panels may occasionally be warranted. The reinforcing motive is scarcely developed in exterior expression except in that the walls are thinner than concrete walls could be otherwise; but, as reveals may be the same as usual, there is no departure from the familiar on this account. The floors may be of one construction or another without need for a reflection in the design. The differentiation from frame, brick and stone is mainly in surface form and is achieved by falling back upon a severe though appropriate simplicity of design, practically eliminating all mouldings and, in place of elaboration of window framings, porches, balconies and other features with usual motives, making use of mosaic themes and by inlaying tile or other bits of color pattern. The surface treatment should be the brush and wash method exposing the aggregates and producing a pleasing and broken tone of color which may

either be in warm earth shades or the cool grey of blended black and white stone chips.

Some charming results are possible on such lines while expressive in a direct manner of the properties of the material and radically independent of tradition and convention, though the character of certain styles is almost unavoidably reflected to some degree. There is a praiseworthy simplicity and directness about such work that is refreshing after the garish artificiality so often met with and is something much needed for the healthfulness of present architecture. The plastic opportunities of concrete mean, too, the regaining of some of the lost feeling of handicraft. The material possesses an essential instinct for the hand-made in distinction to the machine-finished. It is naturally more readily in domestic than in commercial or monumental work that this feeling may find a ready outlet, and the former alone is certainly a large field. To what extent concrete will invade the latter class of buildings is as yet problematical. However, in the writer's belief, the future will witness a successful effort at enlarging the apparent limits of concrete expression to include such problems which an economically strong position promises to place squarely before the architecture of the future.

When we turn from a rural setting to city streets, from the simplicity and refinement, which it is, there above all, desirable to express, to the formality, the pretentious size and multiplicity of units, characteristic of commercial or semi-commercial building, we are face to face with quite a different design problem. Reduction of composition to the simplest terms means too barren a treatment for the scale, the repetitions and lack of relief involved. Surface treatment alone, however pleasing, will not entirely answer. The tile-mosaic motive should not be used indiscriminately but with the discernment we would show for something rare and delicate, just as we would not care for flower gardens that covered the whole landscape. Wrought metal accessories and enriched fenestration will be help-



ful. Still, what is required in the class of composition we refer to, is form and organic proportion. For such necessities we shall certainly have to be dependent, for a while at any rate, upon classic form, that is to say, upon the externals of the already developed architectural styles.

Very few designs have as yet been made, for buildings of extensive size, that announce with any positiveness the nature of concrete, particularly as expressed in reinforced construction. Most of the office buildings erected in the new method have been faced with brick and stone. The few that have ventured to depend solely upon concrete have kept pretty close to the precedents of masonry, not attempting a more direct expression of the individuality of concrete than to avoid an excessive pronouncement of stone. The Gloeker building in Pittsburg may be instanced. The Monolith building in New York shows, however, a well studied effort to design detail more conformable to the nature of concrete.

A bold attempt to emphasize reinforced concrete characteristics was made in the Marlborough-Blenheim at Atlantic City. Though the result may be in some respects bizarre, it is also successful in presenting a forceful essay in logical design. The Ponce de Leon Hotel at St. Augustine, built many years ago, is a beautiful rendering of one aspect of concrete—heavy walled construction with brick, terra cotta and timber as accessories for the featurings of the design, concrete being a sort of background material.

Even in the most individualistic work, the past has been drawn upon freely for minor motives at least. It has been usual to seek precedent in styles that delighted in color incrustation and excelled in tile work, mosaic and stucco—Persia, Arabia, Byzantium, and, we may add, Venice. Yet Venice we can but feel is too fragile a flower for the climate of this unpoetic age; and the others are not great architectures. We have also turned quite naturally to such other styles as were

distinctly monolithic and plastic in expression: to Egypt and the Spanish Missions of California. And just as these two are as opposite poles in feeling, so are they both too foreign to our present mode of thought and environment, for it is to be artistic wisdom to reproduce them unless in their own climatic surroundings. We may look to them for hints and extract ideas that we can use, if we are clever enough, but literal reproduction is as ill advised as is the imitation of other materials.

The foundations of useful inspiration, then, belong to eras that are gone and with which we are not now particularly in sympathy. While the same is true to an extent of every style of the past, yet our present ideas, our mode of life and mould of thought find easy and fairly natural expression through adaptations from the various offshoots of the Renaissance.

The manifestation of *l'art nouveau*, while having more force in the allied plastic arts than in architecture, yet has essayed expression in the latter. Quite independently of reinforced concrete suggestion it has created forms highly imbued with the feeling of this material, though in the judgment of the sober minded, falling usually into inconsequent excesses or trivialities. It would be interesting to seek out in what respects this emancipated style may be expected to contribute to creative design in concrete.

The problem of the future as to concrete—and in the latent originality of this material is the chief hope of future style—is to develop the suggestions we may glean from the barbaric styles of color and incrustation along new lines and at the same time to create, consistently with structure and material, motives of form and line, both in concrete itself and in combinations with other materials, that will save to us the classic sense of rhythm; our inherited desire for architecture that is dignified and graceful—formal where required, beautiful in any case.

H. Toler Booraem.



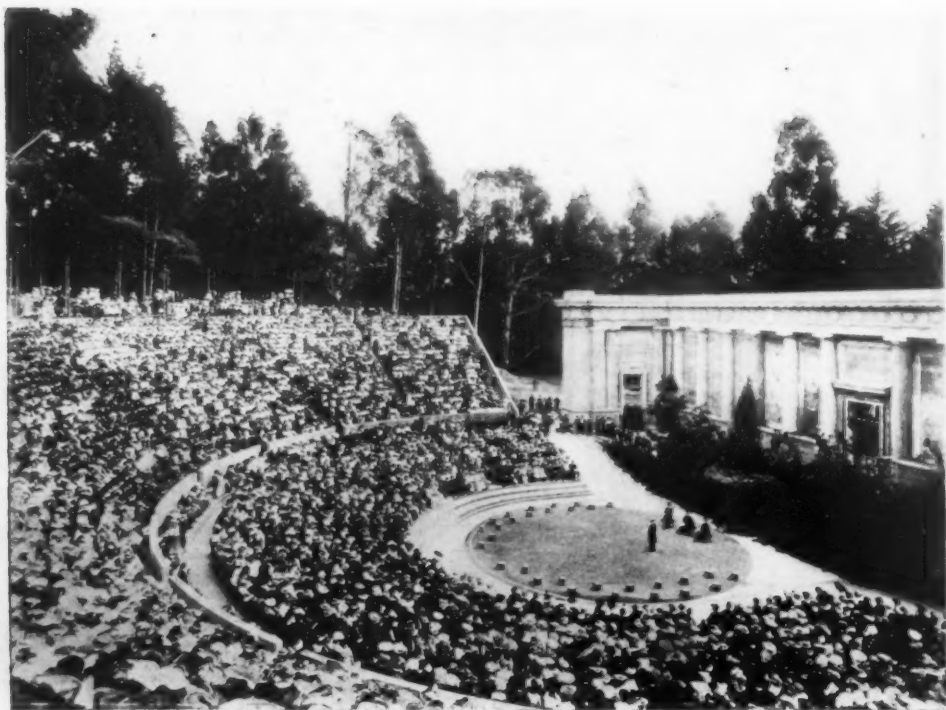
## The New University of California

### I.

Among the American universities there is none which is growing much more rapidly than is the University of California, and there is none whose growth is more significant and promising. This institution is the State university of California; but it has characteristics which distinguish it sharply from the other State universities. Just as the State of California claims to be, and with justice, an imperial State, just as the city of San Francisco claims to have, and with justice, certain traits of a metropolitan city, so the University of California, situated across the bay from the city of San Francisco, is destined to be something more than a provincial college. No one who has considered candidly the differences in social, moral and intellectual outlook between the Californian and the inhabitant either of the Middle West or of the Eastern States, can doubt that California will develop in the course of time a society and a civilization differing in certain essential respects from that of the rest of the country; and it is extremely probable that the most characteristic expression of California's peculiar phase of Americanism will be found in the intellectual sphere. This prophecy can hardly be justified by any actual achievement; but it exists in the minds of the enlightened Californians as a living aspiration. They believe in the future of their State in the way that is quite impossible for the Nebraskan or the New Yorker; and they are justified in this belief, because the boundaries of California are not arbitrary, because its traditions are unique, and because, with its mountains and its coast, its mineral and its agricultural wealth, its industrial and its commercial possibilities, and its peculiar advantages as a place in which to live, its statehood is something more than a legal expression. So the Californian is constantly preparing and working for a future which shall justify the imperial promise

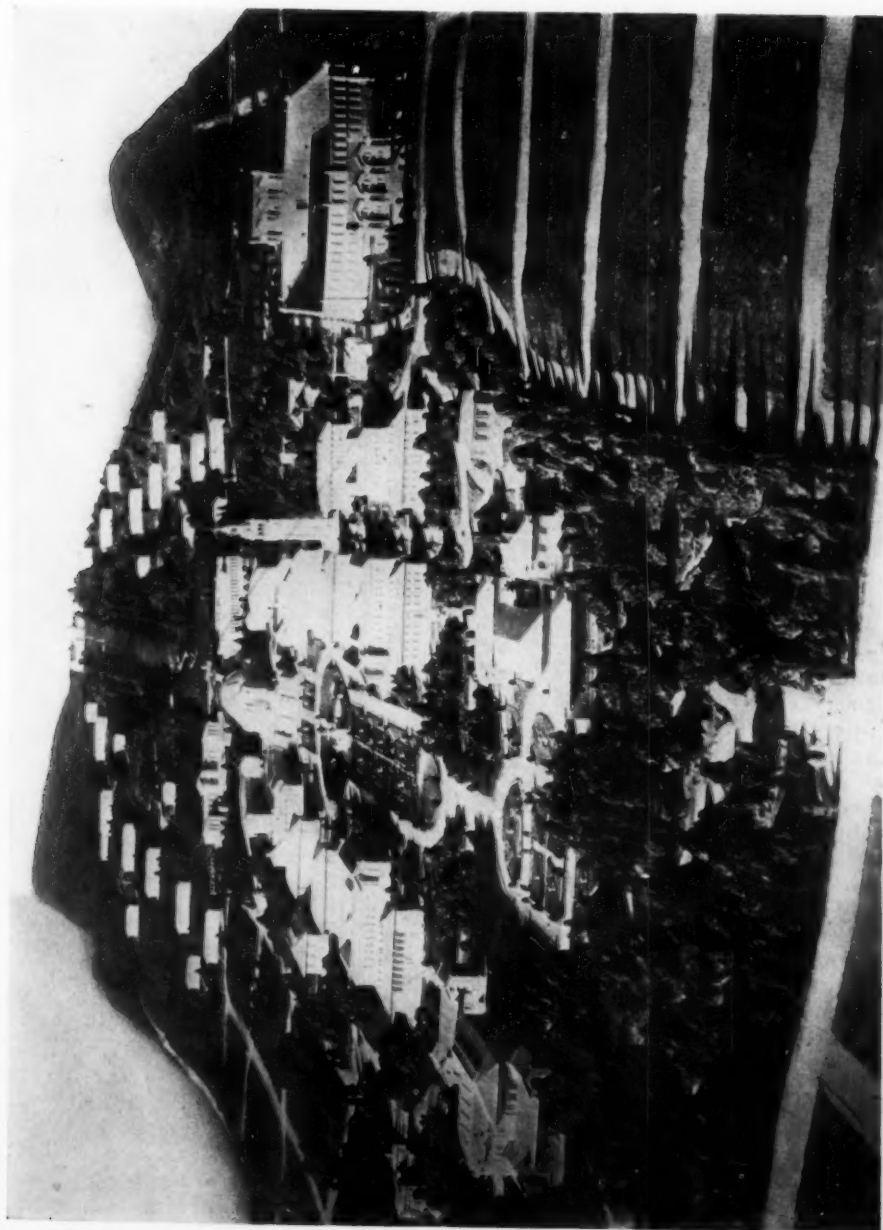
of his State; and among the institutions which are being wrought pre-eminently under the influence of this larger outlook, the University of California must be counted as not the least important.

When a State assumes the responsibility for the income and the welfare of a university, the consequence usually is that the institution so supported is obliged to get along without private benefactions. The liberal millionaire generally bestows his gifts upon institutions which cannot subsist or increase without an endowment, and which become, consequently, at once an evidence and a memorial of individual generosity. Such, however, has not been the case with the University of California. It owes much to the State, but it also owes much to the benefactions of well-to-do Californians; and for this reason it becomes peculiarly representative. It is neither merely an official institution; and its efficiency and standing are not impaired by the perfunctory service which State institutions often command, and the meager rations on which they are obliged to subsist. Neither is it an institution which is less representative, because it is too much the issue of the generous aspirations of one man. It combines the authority which is derived from its official allegiance to the State, with the freedom and flexibility which are contributed by its affiliation with Californians of wealth and intelligence. It has the advantage of a strong and opulent competitor in the Leland Stanford, Jr., University; but it is not handicapped in this competition by the want of friends as liberal, if not as plethoric, as the Stanford family. It subsists, so far as American universities go, upon a unique combination of private and public support. The smallest taxpayer may be interested in it, because it is partly maintained by State appropriations, while at the same time many wealthy benefactors have already scratched their names on its memorial



THE GREEK AMPHITHEATRE AT THE UNIVERSITY OF CALIFORNIA.  
Berkeley, Cal.

John Galen Howard, Architect.



REVISED GROUP PLAN OF THE NEW BUILDINGS OF THE UNIVERSITY OF CALIFORNIA.

Berkeley, Cal.

John Galen Howard, Architect.

tablets. If this happy mixture of official and unofficial backing can be continued indefinitely, it should in the end give the university a standing as unique as is the source of its income and property. Doubtless the divided nature of its support also has its rougher aspect and its less agreeable consequences. Doubtless it brings in its train some of the disadvantages as well as some of the advantages of both the official and the unofficial universities. But whatever these disadvantages, they are not too high a price to pay for the enlarged opportunities and promise which the university obtains from the peculiarly representative nature of its support.

The new architectural plan of the University of California can hardly be understood except in reference to the foregoing considerations. This plan has been prepared under the influence of the conditions and the ideas which I have been attempting vaguely to describe. Its builders and designers have, from the beginning been imbued with the idea that they were planning a university which was to be the most important single intellectual influence in the lives of an ever-increasing number of Californians. They wanted the university, in its architectural expression, to be worthy of its great future; and in this aspiration they were sustained not only by the State authorities, but by many individual Californians, of whom the most conspicuous was Mrs. George Hearst. In thus building for the future the directors of the university had at once the advantage and the disadvantage of being without any architectural monuments which were worth preserving. The existing buildings, whether because of individual merit or because they pointed towards an admirable tradition, did not deserve perpetuation. The university could build for the future, unhandicapped by the past.

There are many people who will believe that the absence of an honorable architectural tradition was more of a disadvantage than an advantage, particularly in the case of an institution like a university which lives so much upon tradition. To such an institution

the past should be a guide rather than a handicap. But this comment, whatever its general truth, is in the present instance beside the mark. The directors of the university were, as I have said, anticipating and preparing for a future of a scope and a significance out of all keeping with its modest achievements; and under such conditions their freedom from any specific architectural allegiance was on the whole a palpable advantage. They could found a local tradition more appropriate than that of collegiate Gothic or Colonial; and they could embody this tradition in a plan which would be all the more adequate, because it was not necessary to preserve existing buildings on their sites, or to consider specific styles. The adequacy, the integrity and the propriety of this plan would, if it were well conceived, be proportionate to the extent from which its designers were emancipated from conditions which were, after all, irrelevant, in view of the much more magnificent promise of the university's future. No doubt an Eastern university, such as Harvard or Princeton, may anticipate a future of much greater amplitude than its past, while at the same time seeking to preserve all that was valuable in its local tradition. But Californians are united, much more than are the inhabitants of any Eastern State, by the future they are building; and the really formative influence in that future is not a tradition so much as an adequate and fruitful idea.

## II.

It was under the influence of considerations of this kind that the plan for the greater University of California was wrought. In 1901 the first steps were taken towards the architectural foundation of the new university. The idea was that such a university must receive an architectural embodiment which would really symbolize the larger aspirations of its friends and its own increasing intellectual authority; and under the influence of this idea there was instituted, with the assistance of Mrs. George Hearst, an international competition. The object of this competition was not so much to secure the designs



CALIFORNIA HALL, VIEW OF LONG SIDE FROM THE SOUTHEAST—UNIVERSITY OF CALIFORNIA.

Berkeley, Cal.

John Galen Howard, Architect.



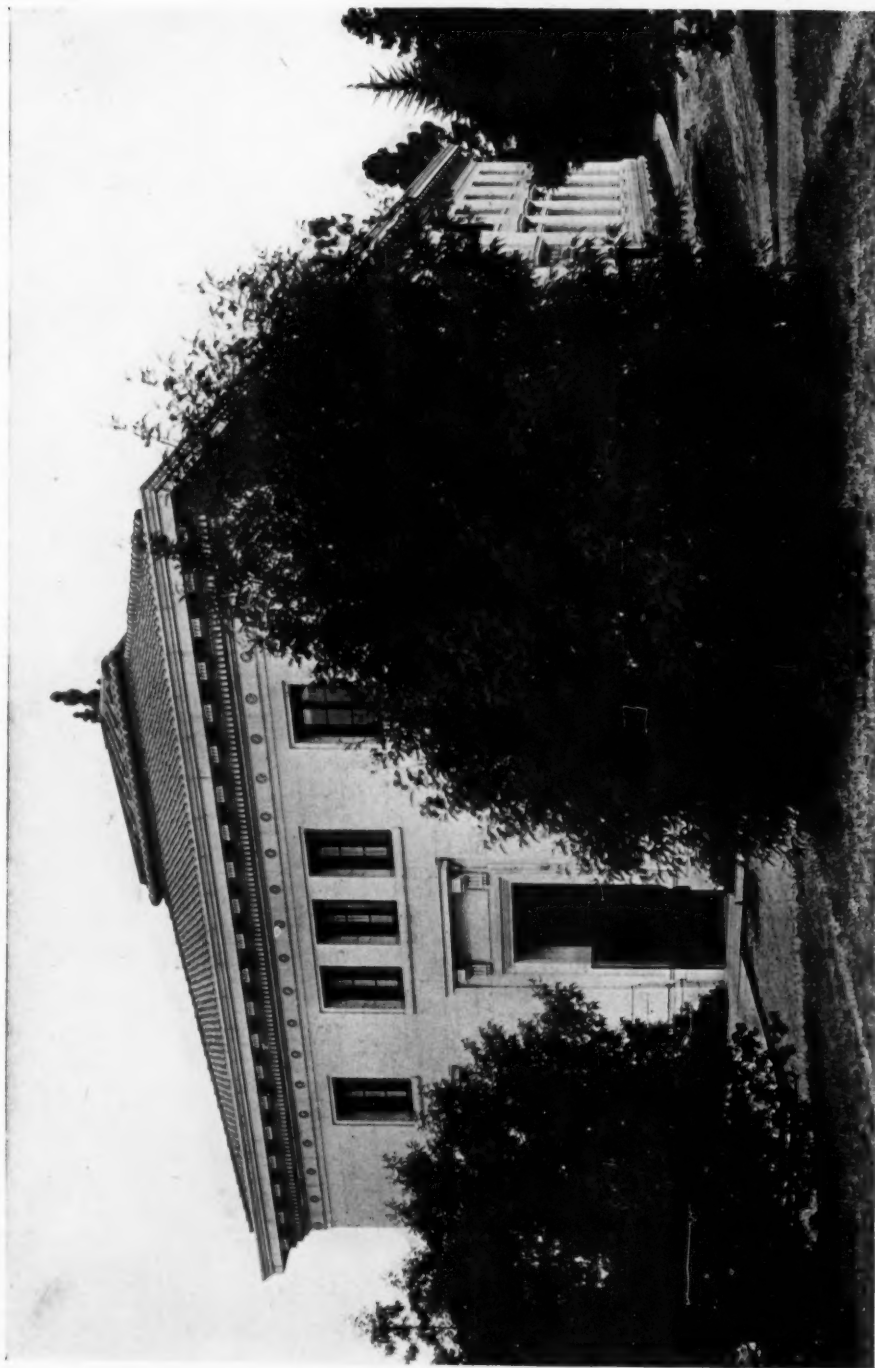
of a series of individual buildings, the money for which had already been provided. What the overseers of the university wanted was a general plan which would take advantage of the superb site at Berkeley, and which would provide an appropriate place for every important building that during the next several generations the university was likely to need. All these buildings were to be subordinated in their location and their design to one comprehensive architectural scheme, which was to be prepared after full consideration of every relevant aesthetic and practical consideration.

It will be remembered that the competition was won by a Frenchman, M. Emile Bénard, a very brilliant architectural designer; and the plans which secured for him the award were not the least brilliant of his achievements. They were, however, very much more in the nature of preliminary sketches than finished drawings. They had been prepared without the benefit of a visit to Berkeley, and, besides, they were drawn on the very small scale of fifty feet to the inch. At a later date M. Bénard paid a visit to Berkeley and drew up a revised scheme, in which were embodied many important modifications of his original drawings and some decided improvements; and it is this scheme which has formed the basis of the plan according to which the greater university is now being constructed.

A preliminary plan, however, is one thing, and its actual execution, under conditions imposed by time, money and a complex set of practical conditions, quite another. It was neither possible nor desirable that M. Bénard should remain at Berkeley to undertake or even to start the more difficult work of carrying out his own plans; and in his place the university was fortunate enough to secure the services of one of the few American architects to whom such a task could be safely entrusted—Mr. John Galen Howard. The position required something more than architectural training, experience and ability, because it was something more than an architectural idea which

its incumbent was required to feel and to realize. The architect of the new University of California had to be able, not merely to design a group of buildings, but to participate in the task of converting a small university of limited resources and purposes, into one of the greatest and most adequate educational institutions in the United States. It was in part an intellectually and socially constructive task to which he was called; and the fulfilment of such a task requires, it scarcely need be said, an unusual combination of such qualities as tenacity, courage, patience, flexibility and intelligence. Mr. Howard has proved his ability to devote himself with disinterested enthusiasm to the fulfilment of an idea. Little by little he abandoned a lucrative practice and an enviable position in New York in order properly to perform his work in California; and he ended by establishing his residence in Berkeley, where he undertook not only to plan and design the new buildings, but to organize an architectural department in the university. He has become the representative in the counsels of the university of the plastic arts in their relation to the higher education, and he has consistently proclaimed the importance of aesthetic training as an element in the consummate educational process. All these additional tasks are a natural development of the fundamental work to which he was called, of designing in detail the buildings of the new university, for the great architectural plan could never be loyally and intelligently realized without a gradual increase of architectural interest and understanding on the part of the alumni, the friends and the overseers of the university.

It is, however, Mr. Howard's primary work with which we are here chiefly concerned; and that work in itself was a sufficient test of Mr. Howard's abilities and his patient and loyal devotion to his task. M. Bénard's plan remained, even after the modifications, a sketch; and the gradual fitting of a preliminary sketch to a complex set of practical conditions, without any impairment of the original architectural idea is, as every architect knows, the most trying part of



CALIFORNIA HALL, DETAIL FROM THE SOUTHEAST—UNIVERSITY OF CALIFORNIA.

John Galen Howard, Architect.

Berkeley, Cal.



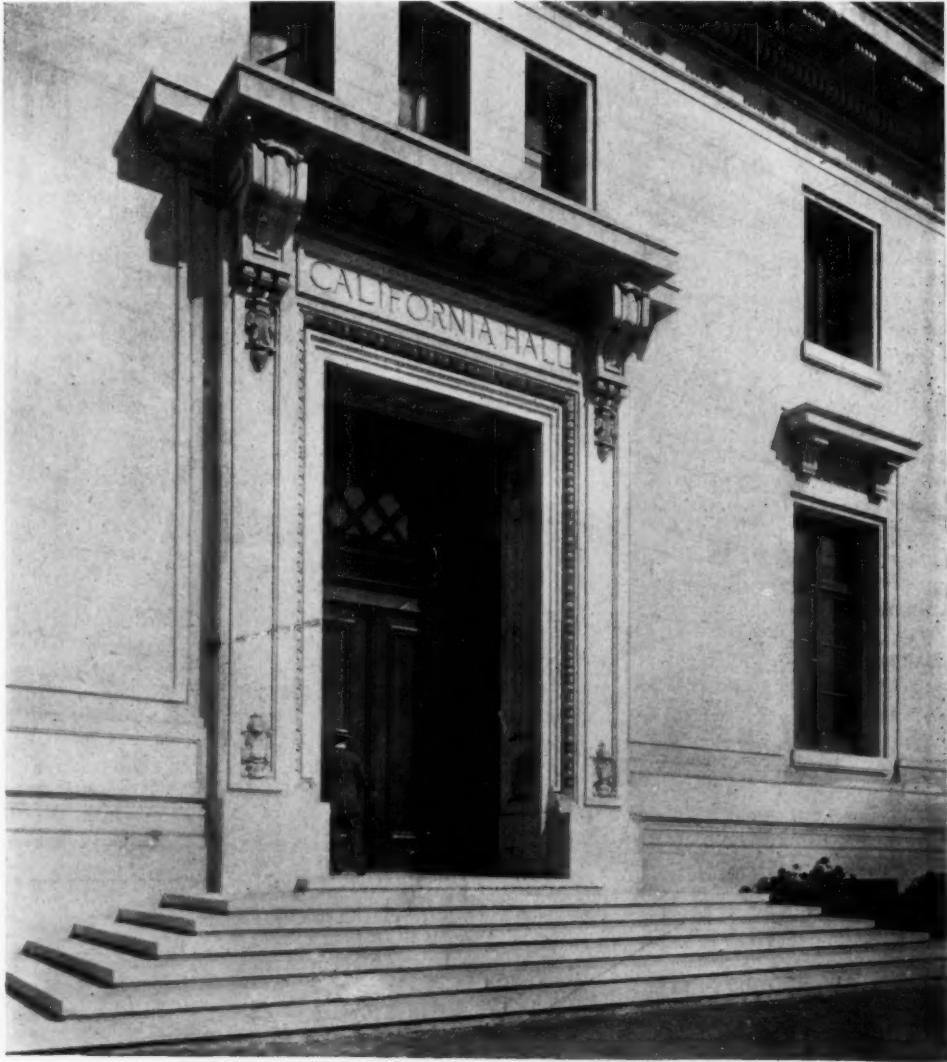
CALIFORNIA HALL—LOBBY OF THE EXECUTIVE OFFICES.



CALIFORNIA HALL, TOWER HALL AND STAIRWAYS—UNIVERSITY OF CALIFORNIA.  
Berkeley, Cal. John Galen Howard, Architect.

the work. As a matter of fact, it was soon found that M. Bénard's plan had to be followed more in the spirit than in the letter. The salient characteristics of

and forming a central line of cleavage from one end of the grounds to the other. Two hardly less important axes, running north and south, cross the main



CALIFORNIA HALL, MAIN ENTRANCE—UNIVERSITY OF CALIFORNIA.

Berkeley, Cal.

John Galen Howard, Architect.

his scheme have been described in the following terms: It is "composed upon a main avenue or esplanade, running nearly east and west across the grounds in the direction of their greatest length,

esplanade at a considerable distance apart. The more westerly of these lines determines the centre of a great court, which has received variously the names, Fines Arts Square, Library Square and

the like, according, as in one sketch or another, the museum or the library filled the place of honor and gave the court its special character. The more easterly axis opens up a long vista towards the south, which is terminated by the athletic field and the gymnasium, quite at the southern boundary of the grounds. The various academic buildings are grouped upon these three axes, in accordance with well-recognized principles of formal architectural composition, yet in such a manner as to give great variety of aspect. The buildings are of various sizes, of different scale, of diversified outline, while the tendency of the architectural treatment is nevertheless consistent in its generally classic character."

Such was the general composition which Mr. Howard was asked to execute when he assumed charge of the immediate architectural future of the university, and the salient features of this scheme he has found no reason to modify. The plan, in accordance with which the new buildings of the university are now being erected, includes an esplanade, running in a general direction from the west to the east, and two cross axes running, of course, in the opposite direction. This plan has, nevertheless, been profoundly changed, if not in its outlines, at least in its application to the grounds. The Bénard scheme demanded a drastic and extremely expensive remodeling of the site of the university. The main axis, for instance, crossed a broad, shallow amphitheatre of hills, beyond the crown of which the land falls away sharply and irregularly. In order to get the esplanade safely across these hills, an immense amount of filling, grading and cutting would have to be undertaken, and certain of the natural beauties of the site destroyed. In M. Bénard's plan these difficulties were met by a bold device, which is described by Mr. Howard in the following words: "The crown of the hill was in that design lowered by an average depth of twelve feet, and the succeeding declivity was crossed by a broad causeway or bridge, lifted above the adjoining levels to a height of seventeen feet. The grade line of the bridge

was maintained throughout the entire length of the botanical garden, which was shown as filled to an average depth of ten feet. By these means virtually a single magnificent slope at a very easy inclination, held from the entrance at Oxford street to the end of the esplanade."

The architectural effect which would have been obtained by means of the Bénard plan might well have been magnificent, but its expense was prohibitive and its drawbacks serious. Mr. Howard has sought to preserve the advantages of the plan, while at the same time avoiding its difficulties, by running the main esplanade along a somewhat different line. This line does not depart from the same general direction, but it has the great merit of preserving the entire middle portion of the grounds at approximately their present grade. It requires a much smaller amount of filling and grading than does the line proposed by M. Bénard because it corresponds with the natural central line of drainage, and its establishment has revealed the possibility of retaining many minor beauties of the site from the beginning to the end. It will be useless to trace this line in detail from one end of the grounds to the other, because it would require either a visit to the site of the university or a detailed topographical map in order to appreciate its advantages; but an examination of the illustration of the model which accompanies this article will disclose how naturally and snugly the plan has been fitted to the configuration of the ground. That site naturally divides itself into four parts. Of these the central portion is by far the largest and most important, lending itself readily, as it does, to the construction of a number of monumental buildings, properly grouped along a salient line. The land to the west forms a natural approach to that group, separating slightly from the town and giving it the seclusion which is appropriate to a university surrounded by a modern American suburb. The hills to the east afford a majestic natural emphasis to the climax of the composition. Finally, to the south, just aside from the path of learning, yet closely





HEARST MEMORIAL MINING BUILDING—FROM THE SOUTHWEST—UNIVERSITY OF CALIFORNIA.  
Berkeley, Cal.  
John Galen Howard, Architect.



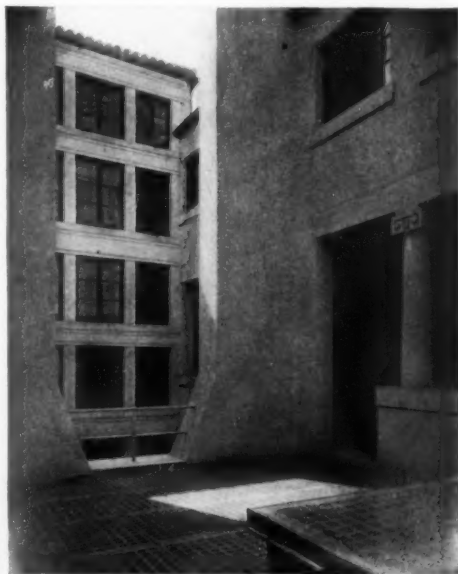
SOME OF THE SPLENDID TREES ON THE  
UNIVERSITY GROUNDS.

joined thereto and playing its own part in relation to the essential task of the university, lie the fields to be devoted to athletics. In short, the plan, in its relation to the grounds, is summed up by Mr. Howard in the following terms, borrowed from domestic architecture: "The house, consisting of the most important academic building, has its forecourts and garden to the east, its secluded retreat to the east and its play-ground to the south."

### III.

Another respect in which Mr. Howard has been obliged to modify the Bénard plan radically is in the location of the various buildings. The sites selected for the buildings should obviously be determined rather by considerations of convenience than by strictly architectural reasons. It makes no difference to the effectiveness of an architectural scheme, in case a building situated in a particular spot is called a library rather than a museum, provided it adequately occupies its site. The library, consequently, has been shifted from its position in the Bénard plan to a more central location, midway between the two cross axes, where it will

have an exceedingly fine architectural effect, and where abundant room will be provided for subsequent growth. The humanities group of buildings, including belles-lettres, languages, history, jurisprudence and the like, would be arranged immediately about the library. On the opposite side of the main esplanade, thus serving as the architectural balance of the library, is the museum; and if the museum is devoted to natural history and ethnology, as well as to art, the buildings occupied by those branches would be grouped around the museum as a centre. Inasmuch, however, as these and other buildings, the library excepted, only exist in the realm of project, their location cannot be absolutely determined by Mr. Howard's plan any more than by that of M. Bénard's. Certain logical and convenient arrangements can be suggested; but the final decision can only be made when the means are available for construction. So far, the only buildings actually erected are California Hall, which serves as an administration building and as a group of lecture rooms; and the Mining Building, funds for the erection of which were provided by Mrs.



HEARST MEMORIAL BUILDING—AN  
INTERIOR COURT.  
University of California.

George Hearst. These two buildings, while of the utmost practical value in the work of the university, do not occupy important places in the architectural scheme. The Greek Theatre has also been partly completed, owing to the liberality of Mr. William R. Hearst; but the Greek Theatre occupies a secluded site back of the main group of buildings, so that its construction does not help the imagination towards a projected realization of the whole scheme. The library will probably be the first building of salient architectural importance to be built, and as soon as it and its companion, the museum, are completed, the plan will take visible shape and its architectural and practical advantages more fully realized. In its present form this plan has cost its creator an amount of detailed architectural study, of patient and exhaustive investigation into practical conditions, and of imaginative architectural invention and anticipation which is almost unique in American architectural practice.

The buildings already completed, few as they are, have, however, set the note and established the style. This note and style must be maintained unless the entire plan is to be thrown away and a new beginning made; and as nothing of the kind will happen during the present generation, it may be assumed that the style will become too well established thereafter to be disturbed. That a certain style, related fundamentally to the classic tradition in architecture, has been adopted for the buildings of the University of California is a matter of prime architectural interest, not only for the architectural future of California, but for the future of collegiate architecture in all the Pacific States. No doubt the adoption of such a style was practically implied when a French architect was awarded the prize in the original competition. No doubt it was in a sense implied when the decision was reached to submit the future building of the university to the restrictions of a single plan, because such a plan necessarily brings with it the formal arrangement of a group of monumental classic buildings. The extreme importance of such

a decision none the less remains a matter for explanation and discussion, while at the same time the complexion of the whole question is gravely modified by the peculiar character which Mr. Howard has bestowed upon such examples of the style as have already been erected. The bearings of this question demand some consideration preliminary to an account of the buildings already erected.

It has been stated that under the Bernard plan the buildings were to be "of various sizes, of different scale, of diversified outline, while the tendency of the architectural treatment remains, nevertheless, consistent in its generally classic character"; and this description remains as true of the plan after Mr. Howard's modifications as before. The most significant matter for controversy is suggested by the description of the buildings as consistent in their generally classic character. A certain phase of opinion in California has been inclined to question the advisability of erecting a group of buildings, consistently classic in design, to provide a habitation and an architectural symbol for the most representative Californian institution of learning. Californians, as I have already remarked, are justifiably proud of their State, and are very much attached to its peculiar local characteristics. The patriotic conscience of a New Yorker may be satisfied in case he can discover in a building or in a painting some slight infusion of an American condition or point of view. He looks forward to the foundation, not of a local metropolitan architectural tradition, but one which shall have certain national characteristics. But the Californian is not satisfied with such anticipations of a national art or literature. To satisfy their existing demands, local art, architecture and literature must rather be Californian than national; and this demand has already had a considerable effect upon architecture in California. They want buildings adapted to the Californian landscape, appropriate to the peculiar character of Californian trees and foliage, and somehow expressive of Californian ways of living and point of view. How can such a demand as this be reconciled with the

erection by their most representative State university of a group of buildings consistently classic in character?

The attempts which have been made by Californian architects to satisfy the demand for local architectural forms have looked in two directions. The more successful of these two experiments consists of a type of picturesque shingled suburban and country house, which is a peculiar and legitimate result of Californian ways of living and of Californian building methods and materials. Obviously, however, such buildings as these are of no use to an architect who is designing a group of monumental collegiate buildings. The other essay in the direction of a Californian architectural style has consisted in the imitation of the old Mission buildings; and this experiment has been responsible for a truly appalling number of flimsy and fantastic plaster copies of the sober conventual buildings of the early Franciscan friars. It is, however, hardly fair to measure the permanent value of the Mission style as an appropriate element in Californian architecture by the frivolous and exasperating popular version thereof; and as a matter of fact, it is not necessary to do so. Stanford University offers an example of the application of the Mission style to a group of collegiate buildings; and this attempt to give a local character to the buildings of a great Californian university was projected at least by one of the greatest of American architects. A better example could not be desired of the possibilities for this purpose of the forms used in the early conventual and ecclesiastical buildings; and after an inspection of the issue of this experiment, we do not believe there can be any doubt as to the verdict. Both from the æsthetic and the practical point of view, the Mission style is very badly adapted to the requirements of a modern American university, be it situated in California or on Morningside Heights.

This verdict is founded on a sufficiently obvious group of considerations. The old Missions were, of course, used for conventual and ecclesiastical purposes; and the attempt to adapt a con-

ventual and ecclesiastical style to the needs of modern museums, libraries, laboratories and lecture rooms must necessarily be a forced attempt. It must end either in the mutilation of the style or in the sacrifice of certain essential practical requirements. The plan of a library, museum or a lecture room can with difficulty be adapted to the forms of Mission architecture. All of them demand an amount of light and a distribution of the floor space which results naturally in a different sort of design; and as a matter of fact, we understand that certain of the buildings erected for these purposes at Palo Alto are very inconvenient places in which to work. Nor is this all. Another series of difficulties have to be faced in case any attempt is made to plan a number of Mission buildings in such a relation, one to another, as will make either for convenience or for unity of architectural effect. The Mission style, like other conventual and ecclesiastical styles, lends itself admirably to the grouping of a few buildings around a court or enclosure; and if a modern American university were made up of a collection of colleges, every one of which preserved its pedagogical and architectural autonomy, each of these colleges could be planned and designed along the lines of one of the old Missions. But an American university is a very different thing. It consists of one big college, divided for convenience into a number of different departments. The buildings in which the work of these several departments is performed should, as far as possible, be grouped according to one comprehensive and coherent plan. Such a plan would demand not merely many buildings, but buildings of many different sizes, exposures, aspects and heights; and the attempt to adapt the Mission style to the exigencies of such a plan would tax the greatest architect beyond his power.

The fact is, of course, that the rude but charming archaism of the old Missions is wholly out of keeping with the needs of modern American building; and the idea of using them as the point of departure for contemporary Californian architecture is merely an evidence



HEARST MEMORIAL MINING BUILDING, SOUTH FRONT—UNIVERSITY OF CALIFORNIA.  
John Galen Howard, Architect.

Berkeley, Cal.



of architectural immaturity. Californians are, as I have said, tied one to another by the future they are in the act of building. Their attachment to the Missions, and to the life and intellectual outlook therein embodied, is not historical; it is wholly sentimental and literary. The one way to impart a local characteristic to their architecture is to make it embody local and contemporary needs and conditions. To be sure, it may embody local and contemporary needs and conditions without any defiance of the past, and with apparent regard for the future; but in any event the claims of the present are paramount. The traditions of the past, from which assistance is asked, must be appropriate; and the future, which is to be built, must be the natural outgrowth of existing needs and ideals.

The official architectural plans of the University of California are characterized at once by fidelity to an appropriate architectural tradition, by a confident and aspiring outlook towards a larger but not too remote future, and, above all, by a paramount solicitude for the actual needs of the university. When the competition was originally held, and when the Bénard plan was adopted, it was, of course, entirely possible that the plans might have miscarried. Through the attempt to realize too much of its magnificent prospects at the present time, the university might have tied itself to a grandiose and rigid architectural scheme, upon which much money would have been spent for years, only, perhaps, to be wasted in the end. But the men who have since been responsible for the architectural direction of the university have skilfully avoided the pitfalls into which they might have been betrayed by the adoption of a big architectural scheme. The plan has been modified in such a way that its gradual realization does not require an expensive re-formation of the university site or a rigid distribution of the university buildings. At the same time, while being made flexible, with regard to the future, it has also been emancipated from an embarrassing allegiance to a narrow or a rigid architectural tradition. The plan has been stripped of the merely French accessories, with which

it was originally entangled. The great purpose has been to make every building which was erected the best possible expression of existing needs and conditions; and if these buildings embodied an architectural tradition or are arranged in reference to a greater architectural future, that is because the needs of the present cannot be satisfied except by means of such ties and anticipations.

The truth is, as has already been suggested, that the adoption of a consistently classical architectural tradition was necessitated when the Bénard plan was selected. A collection of monumental buildings cannot be effectively grouped around two spacious courts or along an esplanade unless they are designed in conformity with the classic architectural tradition; and the management of the university, when it made that selection, was well advised from every point of view. It was a decision which made both for practical efficiency and for the architectural education of the students and of the community; and it was a decision which promised the best aesthetic results. It can be completely justified as the outcome of a sound conception of the architectural future of California.

The classic architectural ideal and forms, so far from being inappropriate to a Californian university, are peculiarly well adapted to the Californian landscape and to the Californian intellectual and moral tradition. California is more closely allied to Latin civilization than is any other part of the American republic. It was settled by people of Spanish descent and while the tie which connects California with the missions and the friars is merely literary and sentimental, there exists a much more significant connection with the social tradition represented by the early Mexican inhabitants. The American conquerors actually inherited little from the people they dispossessed, but after a prolonged occupation of the Californian country, they have tended to exhibit some characteristics which are more Latin than they are Anglo-Saxon. Under the influence of the Californian open-air life and really temperate climate, they are gayer socially, more expansive and much more

willing to spend time in giving pleasure to themselves and to other people. All this is making for a livelier use of the intelligence and for a more genuine and fruitful interest in the arts, and it is this characteristic which allies them with the Latin peoples. It does not tie them specifically to the Mexicans or to the Spaniards, but it does tie them to the Latin tradition—to the tradition which makes for a socialized rather than merely an individualized art, and for an innocent and well-tempered love of beautiful things. In the course of time the Californians should be able to give a more genuine and a more idiomatic expression to the Latin or the classic tradition in art and architecture than will their fellow countrymen further east. The classic tradition in style is necessarily an artificial thing, except among a people who are socially expansive, and who without any sense of mutilation can subordinate themselves to acceptable conventions of social expression and communication.

It should be added, also, that the Californian landscape, in the settled neighborhoods, is peculiarly adapted to a classic type of building. The whole country lying between the Sierras and the sea, except that near the highest ridges of the coast range, is composed of extremely simple elements. It is not rough, broken, rocky and unkempt. On the contrary, it has comparatively few plains and levels, and those which do exist are usually gentle in ascent, while at the same time being firm and bold both in outline and modelling. A landscape of this kind demands a type of buildings which has been simplified in the classic spirit, and which reaches its effect by the economical but spirited use of the essential architectural means and elements. The typical Californian countryside, indeed, seems peculiarly adapted to the habitation of a highly civilized human society. It can be converted to the uses of such a society not merely without any mutilation of its peculiar beauties, but with a positive enhancement thereof. It lends itself by its contours, its levels, its foliage and its climate to formal architectural treat-

ment; and in this respect the site of the University of California at Berkeley is no exception to the general rule. It is, perhaps, more heavily wooded than is the typical Californian landscape; and it contains an unusual variety of natural incident; but it is peculiarly adapted to just the kind of development which the architectural plan of the university proposes. That plan, when it is carried out, will not impair those natural beauties, but will merely give them a more positive emphasis. The scale of the buildings is fitted to the scale of the countryside and of the trees. Their white walls and tiled roofs will look particularly well in the Californian sunshine and atmosphere. Their lay-out will take advantage of the actual shape of ground, and will lead naturally to the most interesting points of view. A pervading sense of beautiful natural surroundings will be retained, in spite of the fact that one may be walking through the squares and the streets of a veritable city of learning.

#### IV.

The writer, then, has no sympathy with those Californians who object on the score of propriety to the use for the university of a consistently classical group of buildings. Such a plan might, as I have admitted, gone astray, but if so, it would have gone astray only because it was misapplied. An intelligent and skillful use of the classical architectural tradition and forms was precisely what was needed, and the existing architectural direction of the university has made such a use of the tradition, which was accepted, and of the forms, which were adopted. The whole program and method of procedure have been dictated by sound reasoning and appropriate ideas. Neither is this a small merit. In planning the architectural future of a great university, everything depends upon the adoption of a well-considered policy, and one has only to turn over in one's mind the list of the American universities in order to realize what a small number of them have ever adopted a policy of this kind. A university cannot, like a public

building, be erected in a few years, and as the outcome of an over-rigid architectural idea. It must be allowed to grow, just as a human being must be allowed to grow, but it should be guided in its growth by proper and adequate formative influences; and that is what

sance. It has been taken to mean a very simple, economical and even realistic method of design. In fact Mr. Howard in his application of the classic traditions has reduced it to its essentials. He has freed it from any mannerism, and has made it equivalent to a com-



HEARST MEMORIAL MINING BUILDING, DETAIL OF SOUTH FRONT—UNIVERSITY OF CALIFORNIA.

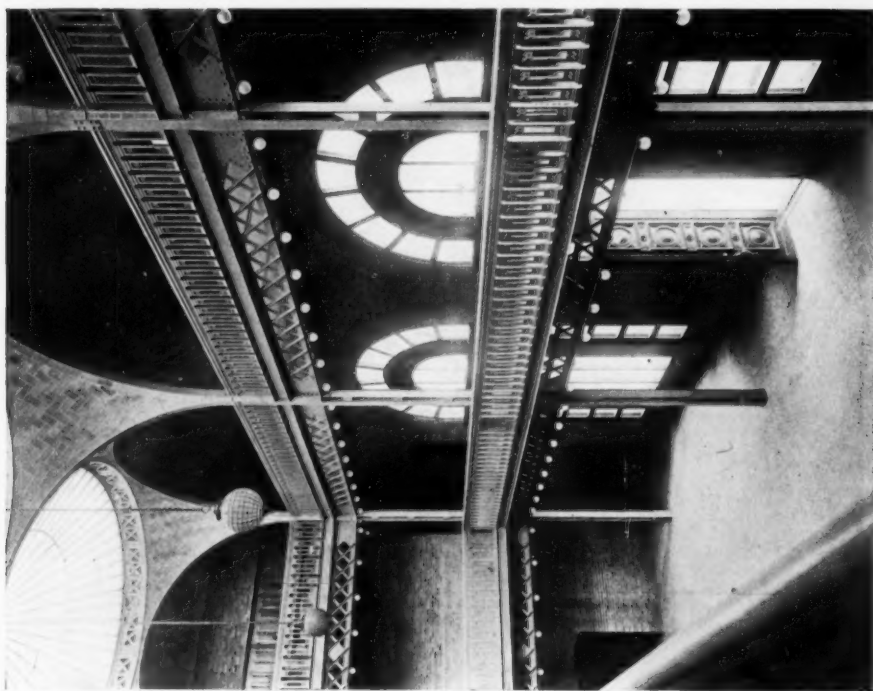
Berkeley, Cal.

John Galen Howard, Architect.

is being done in the case of the University of California.

The buildings which Mr. Howard has already erected embody admirably the spirit of the plan. They are designed in the classic tradition, but that phrase has been interpreted in its broadest sense. The classic tradition has not been interpreted to mean either modern French or Colonial orders, or the Italian Renais-

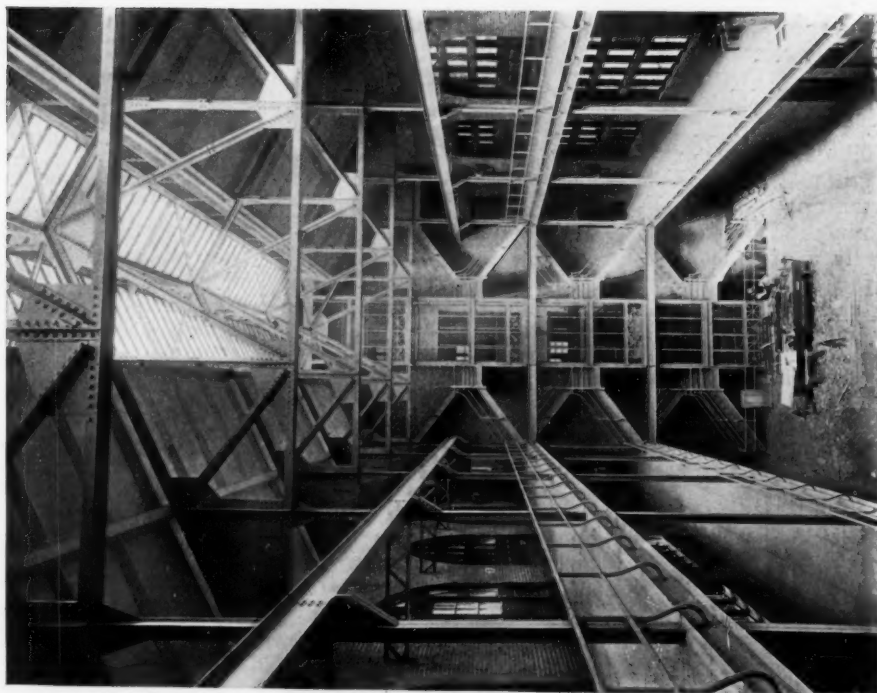
pletely formed, strongly simplified design, expressive at once of vitality and repose. Ornament of all kinds has been used not merely with discretion, but almost with parsimony, yet the effect is not austere because the essentials of the designs have been so well handled. In both California Hall and the Mining Building one is immediately impressed by the great dignity of their treatment,



THE MEMORIAL VESTIBULE.

HEARST MEMORIAL MINING BUILDING—UNIVERSITY OF CALIFORNIA.

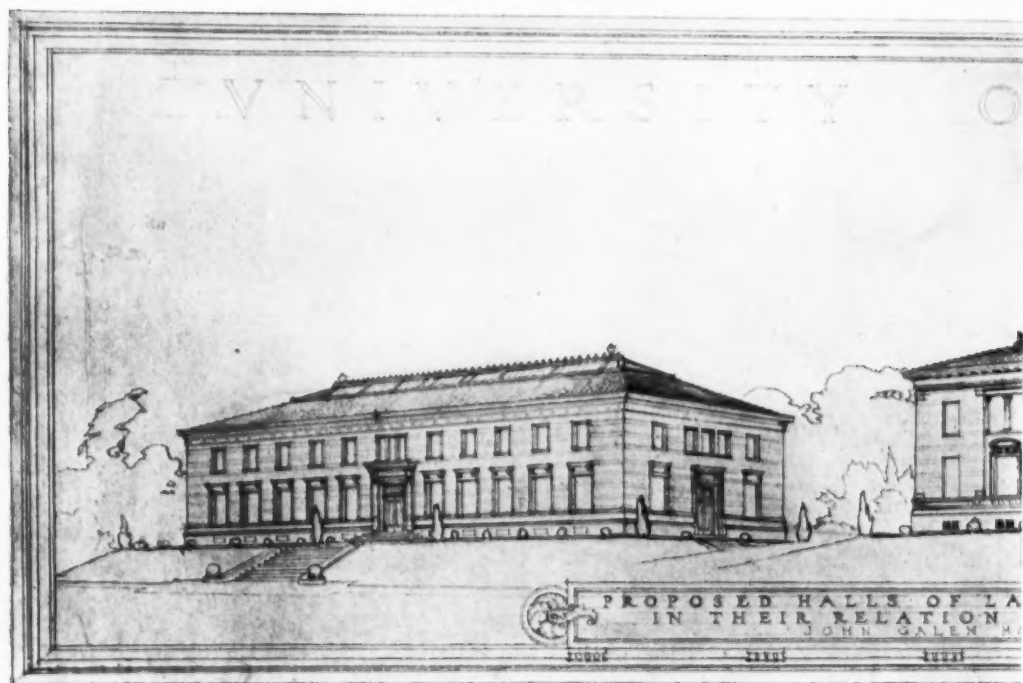
John Galen Howard, Architect.



THE MINING LABORATORY.

Berkeley, Cal.





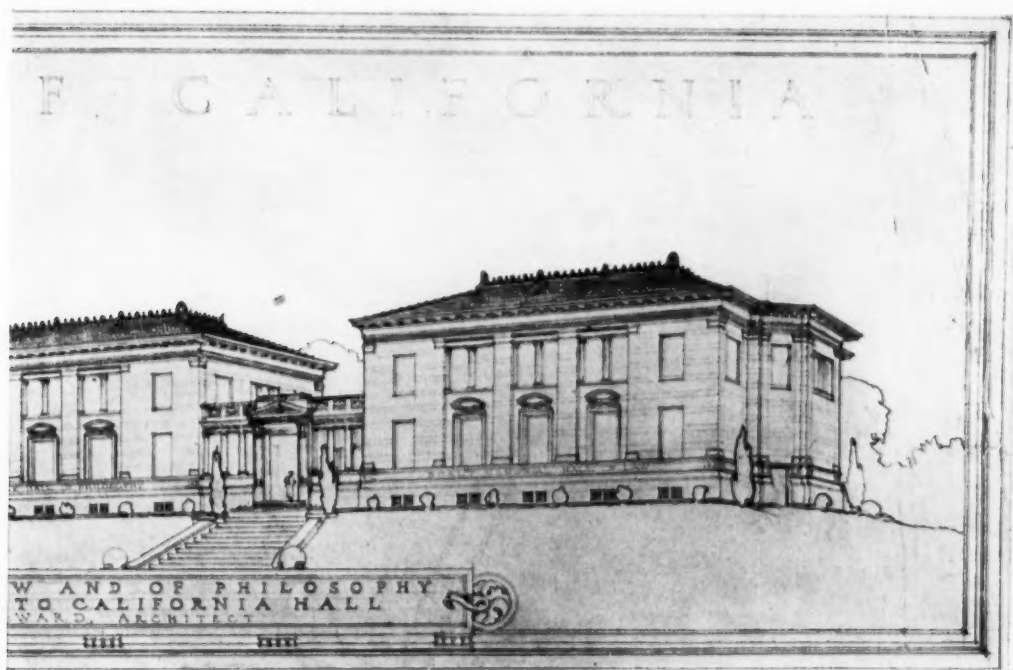
PROPOSED HALLS OF LAW AND OF PHILOSOPHY, WITH CALIFORNIA HALL (ALREADY BUILT) UNIVERSITY OF CALIFORNIA, Berkeley, Cal.

and their effect of dignity is due in part to the fact that their design has been worthily as well as skillfully planned. Mr. Howard has never forgotten that buildings erected for a university should constitute a part, perhaps the most important part, of its means of æsthetic training. They should constitute not merely a gracious influence in the lives of the students, but one that is informing and elevating; and if the University of California continues to build in the spirit and with the success characteristic of its beginning, there will be few universities in the country whose aspect and appearance will lend a more effective assistance to their essential task.

California Hall was the first of the new buildings to be completed. Its lower floor is used for lecture rooms, and the second floor for the offices of the university. It is constructed of a white greyish granite, which is very much the best building stone to be found on the Pacific coast, and which is, indeed, one of the very best stones to be found any-

where in the country. The architect was exceptionally fortunate to obtain a stone as white, as durable, and as interesting in texture and color as is this granite, and he has used it in a manner which brings out all of its good qualities. The stone is laid in alternate courses of large and small blocks, thereby giving an interesting pattern to the walls of the building and a certain elegance to its effect, a quality which is very difficult to obtain with such a material as granite. The stone also has the advantage of cutting extremely well, so that what little detail the architect has used is sharply and effectively worked. The way in which this detail has been designed and rendered is indeed peculiarly worth attention. The management of the face of the building is an extraordinary example of strong and refined design, and so is the treatment of the window frames. When confronted by such a structure as this one is possessed by a sense of exhilaration. It has body, it has breadth, and it has refine-





COMPLETED AND ILLUSTRATED HEREIN) ON THE LEFT OF THE PICTURE.  
CALIFORNIA.

John Galen Howard, Architect.

ment. Its admirable effect has not been imposed upon its frame, and it does not disguise its function, but is the direct expression of the substance and the life of the building.

The treatment of the interior is more severe than that of the exterior. The rooms and the halls on the lower floor have been designed for use and for use only. The structural beams show where they must, and the walls have merely been painted a dull, warm yellow. The severity of this treatment is, perhaps, a little uncompromising, but on the upper floor the aspect of things becomes more gracious. The middle part of this floor is used as a central hall leading to the offices on the several sides. It is lighted from above and the space so lighted has been treated as a sort of a court, enclosed by a row of columns. This arrangement not only makes a very good use of the available space, but it affords a chance for an appropriate and interesting architectural effect. The effect itself, we should say, is not quite so happy as the

idea. It looks rather heavily rendered, in as much as the court is situated rather within than without the building. But if it is lacking in elegance, it is not lacking either in dignity or propriety.

About the Greek theatre, which is in use without being actually completed, it is scarcely time to write in detail. The money provided for its erection was sufficient only to build the amphitheatre and the screen. But the amphitheatre has been left unfinished in rough concrete, the colonnade with which it is to be crowned has been omitted, and many essential parts of the architectural design are not as yet even indicated in the present appearance of the structure. The day will come when this theatre, both because of the peculiar beauty and propriety of its location and because of the arduous study which has been devoted to its design, will demand the most exhaustive consideration from all disinterested students of architecture, but in justice to the architect such consideration should be postponed until the design is

really carried out. In the meantime it may be premised that the theatre from the practical standpoint has been a brilliant success. Its plan provides for the gathering and dispersal of large numbers of spectators conveniently and rapidly. Moreover, those spectators, wherever seated in the spacious amphitheatre, can distinctly hear the words of a speaker on the platform, and even when that speaker is not unduly raising his voice. The symphony concerts which are given every winter can be heard, so

and its function, the Hearst Memorial Mining Building is the most important structure hitherto erected for the Greater University. It was the first of the new buildings to be planned, and the idea of erecting such a building to the memory of her husband was the idea, which in Mrs. Hearst's mind blossomed into the plan now being carried out for the new university; and in this instance the personal motive was happily allied to an idea of peculiar local and historical propriety. Modern California originated



THE UNIVERSITY LIBRARY—UNIVERSITY OF CALIFORNIA.  
Berkeley, Cal.

John Galen Howard, Architect.

it is stated, as well as in the best enclosed auditorium. All this not only testifies to the skill of the architect, but it opens an interesting vista for the future of open-air performances in California. It suggests once again that the Californian, because of the resemblance of the dry climate, to the clear atmosphere of his State to that of Greece, will have an opportunity of reviving certain interesting aspects of classical life such as is possessed by the residents of no other part of America and very few parts of Europe.

Both because of its size, its situation

in the mining industry; and it is absolutely appropriate that its State university should first of all rear a building which is not only a memorial to one of the pioneer miners, but which also is the most carefully planned and completely equipped building in the world for the study of technical mining processes.

In the plan and design of such a building the architect could learn little of value from his predecessors. He was not building a familiar type, such as a hospital or a library, and consequently he was obliged in collaborating with the

head of the Mining Department, Professor Christy, to make what was substantially a novel plan. Inasmuch, however, as they were working largely in the dark, and as a future generation might have either different needs or better ways of meeting the old ones, the plan was made extremely elastic. The main structure was built, as far as possible, as a mere shell whose interior partitions could be torn out, readjusted or rebuilt without impairing the strength or hurting the appearance of the whole edifice. All the chimneys, for instance, most subject to wear and tear, are planned independent of the structure proper. Any or all of these chimneys can be torn down to the foundations without any injury to the building or its equipment.

The dominating idea in the plan of the building was, in the words of its architect, "to keep the administrative and more public parts of the building in the front or south portion. Of these the most important artistically is the great memorial vestibule museum. It occupies the centre of the south façade, and is lighted not only by the three great arches, but also three low domes in the roof. From this vestibule rise to right and left the grand staircases, which lead to the laboratories and the drafting rooms. Within everything is workaday, substantial and convenient, but totally devoid of ornament. It is a mining building first, last and all the time. Yet the building is intended to take on a progressively more civilized aspect and a more monumental beauty, as one passes from the workshops in the rear towards the public portions in the front; and it sounds its highest note of dignity and impressiveness in the great museum vestibule, where the memorial motive is most clearly yet still reservedly announced."

It is not often that an American architect is able or willing to express himself emphatically and candidly in respect to his own work; but Mr. Howard has done precisely this in relation to the Hearst Memorial Mining Building. Assuredly the transcription of his own words will constitute the most helpful commentary on the design of the building. Writing almost six years ago, when

the corner stone was laid, he described his purpose in the following terms: "The exterior treatment is of extremely simple, dignified character, based upon the classic tradition, but strongly influenced by the naïf and charming work of the Spanish Fathers in California, and like that work depending largely for its effect upon the careful proportioning of its voids and solids and upon its low roofs of heavy terra cotta tile overhanging broad unornamented surfaces of wall. The aim has been to give expression to the character of a college of mining engineering as distinguished from one of art, of letters, or of natural science. The expression of belles lettres in architecture demands a more purely classic character than that of scientific studies. Such a building as a library, for instance, may without inconsistency rejoice in all the sumptuous glories of Roman architecture or the Renaissance; the tradition of the world leads one naturally enough in this direction. But the architect conceives that such delicate and highly organized motives find little place in a mining building, which demands a treatment, while no less beautiful, much more primitive, less elaborately developed in the matter of detail, less influenced by the extreme classic tradition either as a canon of proportion or as an architectonic scheme. The profession of mining has to do with the very body and bone of Earth; its process is a ruthless assault upon the bowels of the world, a contest with the crudest and most rudimentary forces. There is about it something essentially elementary, something primordial; and its expression in architecture must, to be true, have something of the rude, the Cyclopean. The emotion roused must be a sense of power rather than of grace. Even the scale of materials, the blocks of stone of which the walls are built, should be bolder and more strongly masculine than that of any other structure likely to find a place in a great university. To produce a design for a mining building which shall in all sincerity express its purpose and at the same time shall harmonize with future buildings quite as sincere in the expression of their purposes—purposes in almost every case



THE TEMPORARY QUARTERS OF THE ARCHITECTURAL SCHOOL AT THE  
UNIVERSITY OF CALIFORNIA.

Berkeley, Cal.

John Galen Howard, Architect.

of greater amenity—this has been the aim of the architect in approaching his task in its artistic phase. If in its treatment he shall have secured a true outward and visible expression of the inward and spiritual organism of the building, and if at the same time he shall have succeeded in throwing over it a degree of charm which shall make it seem a kind, bluff brother amid a bevy of lovely sisters, he will feel that his efforts have not been wholly in vain."

Such were the ideas dominating the architect's mind while the building was being planned. Now let us hear his own comments upon his completed work. In his address, delivered when the building was dedicated in August, 1907, he restated his purpose in the following words: "We have sought to secure beauty, not by easy masquerade and putting on of architectural stuff, but by organic composition working from within out, and letting the heart of the thing speak; we have in all frankness chosen character rather than mere prettiness as the end to be reached, sure that the highest beauty is to be derived from organically right foundations, not from any amount of surface scorings or plasterings. If then the building is of an unusual aspect, it is because the problem was an unusual one—the expression of a new thought or an old thought in a new light, or the first synthesis of a lot of old thoughts, must necessarily be new and fresh. If the expression be true, no matter how strange it may seem at first, in the end it must be seen to be inevitable.

"Useful we have determinedly labored to make this building; beautiful, we have sought inspiration at the purest founts of art to render it.

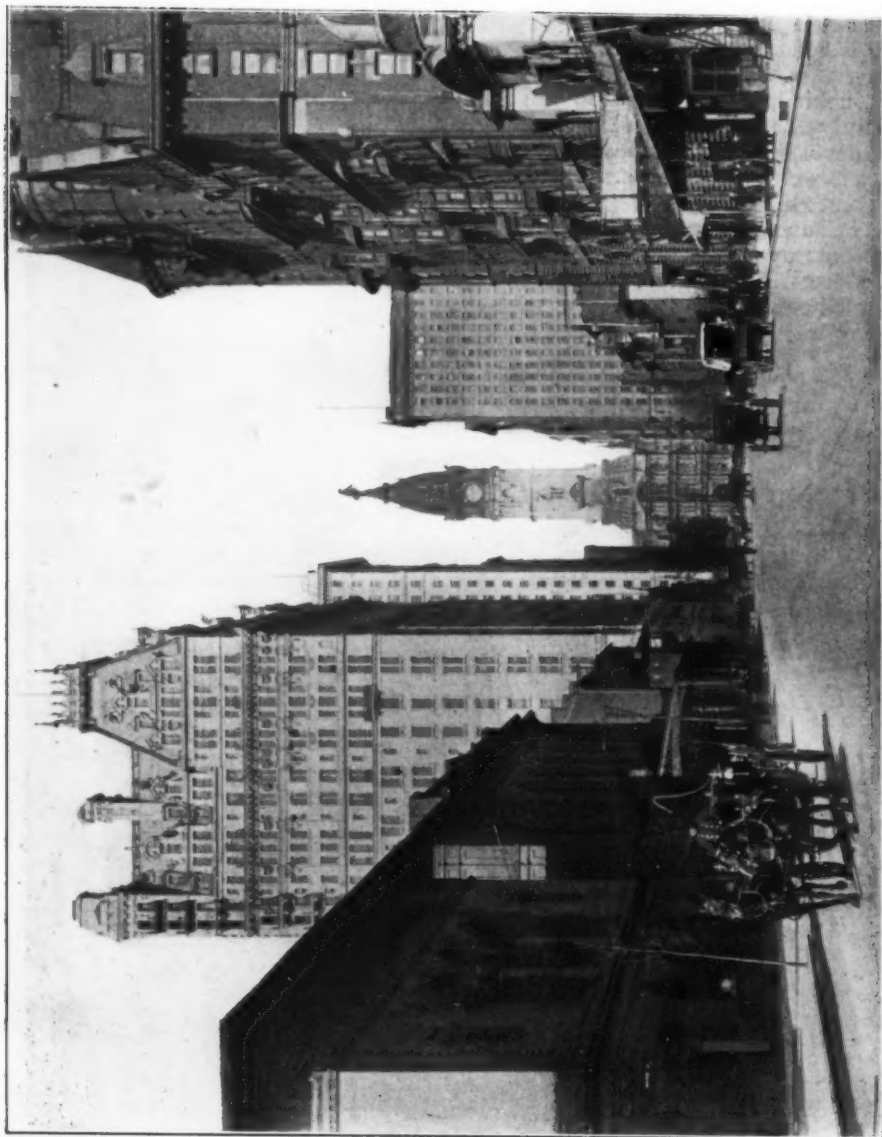
"Our dearest wish has been that it should be able to brave these times and the times to come with a front modest, yet frank—simple, clean, sterling, permanent—beautiful in its own sincere, assured and reticent way, but devoid of anything remotely suggestive of overdoing in the way of ornament or pompous grouping of its parts—its poetic message stripped of verbiage—classic to the core, yet classic of that primitive type

which might almost be called archaic were it not that it is quickened by the breath of modern life."

None can read the foregoing quotations without getting a vivid sense of the earnest intensity, of the absolute personal dedication which the architect has bestowed upon the work; and their reading will explain many things about the building which at first glimpse are not easy to understand. The building is much that the architect has sought to make it. It is above all organically and strongly conceived, and most carefully and elaborately wrought. Its simplicity has become austere, its expression of power primitive and robust without being too emphatic. It gives the effect of being both a memorial and a workshop, of being both a monument and a laboratory. It can be conceived as perfectly harmonious with a group of buildings designed in the classic spirit, while at the same time embodying in itself such a transfigured version of the classic ideal that many ministers of that faith would not recognize the allegiance. It has been the result consequently of an extraordinarily complicated set of conditions, purposes and ideas, and it cannot be wholly justified or appreciated until all of the conditions are fulfilled—until, that is, it is properly approached, properly planted and properly surrounded with its neighboring buildings. In the meantime its novel appearance will make many architectural observers doubtful. The writer, too, has his doubts about one feature of the building—about the propriety, viz., of placing such a roof upon such a façade as that pierced by the three great arches. The character of the roof and the way it is connected with the walls impair to his sense the beauty of the building without contributing anything essential to its character. However that may be, the building emphatically constitutes both beauty and character, and the writer does not doubt that fifty years from now it will constitute one of the buildings erected by the present generation of American architects which will have worn best, and which, in the opinion of that day, will best deserve indefinite perpetuation.

*Herbert Croly.*





HORTICULTURAL HALL. SOUTH BROAD STREET. CITY HALL.  
BELLEVUE-STRATFORD HOTEL.

Philadelphia, Pa.

## Architecture in Philadelphia and a Coming Chance

If Boston, as it is said, be a "State of Mind," it has, nevertheless, bodily aspects which impress the casual visitor. Indeed, the famous mentality may not at first touch be noticeable. The sweeping spaces of the Common and one or two well-set buildings—the Public Library and the State House, for instance—linger in the memory of the traveller. New York has its towering, cloud-swept masses giving it distinction—its open spaces as one ascends Broadway; the stage setting wherein it plays its part impresses the most hurried stranger. Washington, too, in spite of the disfigurements upon its fair face, is nevertheless fair. Parks and avenues and public buildings give an impression of distinction which lingers in the mind. Distinction is the word. That "civic personality" which makes Florence, sleeping beside the Arno, a delightful memory. Toledo, grey and stern upon her jagged rocks; Rouen, with her spires tip-toeing to peep over the surrounding hills; Durham, spreading below her cathedral-crowned cliffs—these have distinction. Man or Nature, or both, have given them an outward form which abides in the mind; the quality of personality is there.

And this quality of civic individuality is worth cultivating. It should be a case of *noblesse oblige*; one should wish his city to have a character of its own if only for the satisfaction of feeling that it was not like the common run of towns. Would that we could foster the spirit of beauty to such an extent that it would be the general desire that this character should be an artistic one. Those of our cities which have character owe it usually to the purely commercial side of their affairs. The smoky, and not unimpressive stretches of Pittsburg, or the skyscrapers of New York are of this class. But if rightly handled purely commercial things can have artistic worth, as may be seen in some of the English and German docks. Since our

people have but little artistic instinct innate in them, let those among us who have use every chance to foster it (particularly in the public schools)—that our future politicians and ward bosses may some day give us the city beautiful. And if not a matter of *noblesse oblige*, the making of a city beautiful will in the end pay for itself in the standing such a city will have in the public estimation. In these days of steam, our cities usually grow in the flat and least picturesque of spots. The most charming of the old towns are those which climb about hill-tops—built when the walled city, easy of defence, was a commercial necessity. For these Nature has done much. Perhaps the coming days of aerial navigation will again make hill-tops the favorite sites.

What little Nature has done for Philadelphia, man has quite nullified. In the laying out of his town William Penn showed the effects of his training and his lack of imagination. True, he planned five open squares—a central one at the intersection of the two wide streets of his town, and four outlying ones—and perhaps he should not be blamed for not foreseeing that streets, wide when bordered by two-storied dwellings, seem very narrow when flanked by eight, ten or sixteen-story buildings. Yet Oglethorpe in his plan for the city of Savannah gave really wide streets, alternating with narrow, and with large open spaces at the junction of the former, making a delightfully "roomy" city—a plan unfortunately not continued by his near-sighted successors of late years.

Set between two rivers on nearly level ground, her open spaces few and unimpressive, all of her streets narrow and of monotonous rectangularity; her good buildings quite overpowered by masses of commonplace or ugly structures, Philadelphia lacks compelling power. Even the roar of Chicago's double-decked rush

lingers in the memory more pleasingly; for if we must be modern and ugly, let us be completely so. The one place in Philadelphia which remains in the mind's eye is the section of Broad Street, the city's most important thoroughfare, just south of the City Hall. Here high buildings frame in a view of the tower of this building and in the afternoon light, with clouds of steam swirling past flecking the buildings with shadows, the effect is not unimpressive. Again, these high buildings seen from a hill in Fairmount Park give picturesque masses, looming like some great castle beyond the wooded hills and gleaming river. But otherwise there is no effective place in the city. One does not expect a *Place de la Concorde* nor a *Piazza di San Pietro* in America (though we will some day have their equal in Washington, and perhaps elsewhere), but there is not a place in Philadelphia which compares in architectural interest with Copley Square, Madison Square, the East and South Batteries in Charleston or Jackson Square (the old *Place des Armes*) in New Orleans. And effective places should be had. We should sacrifice (if sacrifice it be) some of our commercial welfare for the sake of beauty; place our public buildings and churches amid worthy settings. It is urged by some that such things are not democratic, that they smack of kingship or church dominance. But we are too democratic. The freedom of the individual enables each owner to flaunt his inalienable right to build as ugly as he pleases; the law takes care that his building shall not endanger the public, but allows him to corrupt our taste; a thing of very serious danger in the life of the nation. By some the beauty of Paris is held up to scorn as the result of the heavy hand of the tyrant; yet many of the most charming of the open spaces in the Italian towns were established by democracies. In those days even ward bosses seem to have had a sense of beauty.

Philadelphia, in spite of present effort and some isolated buildings of interest is in its total effect depressing. Bad taste is in evidence everywhere. The huge and costly City Hall, completely filling up a small square,—the original central

square of the five planned by Penn—is ungainly in mass and poor in detail: a distorted reminiscence of the stately pavillions of the Louvre. The tower, admired by the uninitiated for its height, simply has that much more space in which to be bad. The unfortunate change in material in the upper stories—an abrupt transition from the white of stone to the dark grey of metal—is fittingly climaxed by a colossal statue of Penn, which now for many years has stood as an emblem of misplaced hero-worship and entire lack of taste. When Philadelphia's re-birth into the world of art shall arrive, the first sign will be the removal of that disfigurement. The fame of William Penn needs no such vulgar blazonment.

Facing the City Hall the Broad Street Station, of an unrelieved and unpleasant red, lifts pseudo-Gothic towers and pinnacles to the sky; the detail, particularly in the interior, is of a kind to make the judicious weep. Facing it is the costly Masonic Temple (when will cost cease to be the popular criterion of artistic merit?) of a supposedly Norman type, the rather stately lines marred by a tower with most preposterous chopped corners and over-hanging pinnacles. On another side of the square is the tall Betz Building, of a bastard Richardsonian type; it needs no other comment. The completed section of the new Wanamaker Building by Mr. Burnham on a fourth side, is the only pleasing thing in the square. A little farther north on Broad Street is the Academy of the Fine Arts, a venerable institution housed in a building also costly, whose façade in the Victorian Gothic, or something else, is weird and strange. It is only surpassed by the Library of the University of Pennsylvania, the "fortified greenhouse," than which nothing more grotesque could be imagined.

However, these buildings and others of less importance in the debasement of public taste are relics of the low-water mark in American architecture—for them Philadelphia is "more to be pitied than blamed," as the melodramas put it. But another structure of much more recent date testifies to the still degraded state of the public art-standards, the

popularly-admired Smith Memorial in Fairmount Park.

This Park is a beautiful stretch of rolling country lying on both sides of the

the Schuylkill, spanned by ugly bridges and bordered by filthy coal and freight yards drags its discouraged length toward the Delaware, an eyesore, and, to



PENNSYLVANIA R. R.—BROAD STREET STATION, CITY HALL SQUARE.  
Philadelphia, Pa. Frank Furness, Architect.

Schuylkill River somewhat above the city; narrowing strips extending down toward the centre as far as Spring Garden Street, where are situated the old water works and reservoir. Below this point

one who has looked upon the Seine, a lasting reproach. It was in Fairmount Park that the Centennial was held (do you know what B. C. stands for in Philadelphia?) and its chief building, Me-



MEMORIAL HALL, FAIRMOUNT PARK.  
Harry J. Schwartzman, Architect.



Philadelphia, Pa.

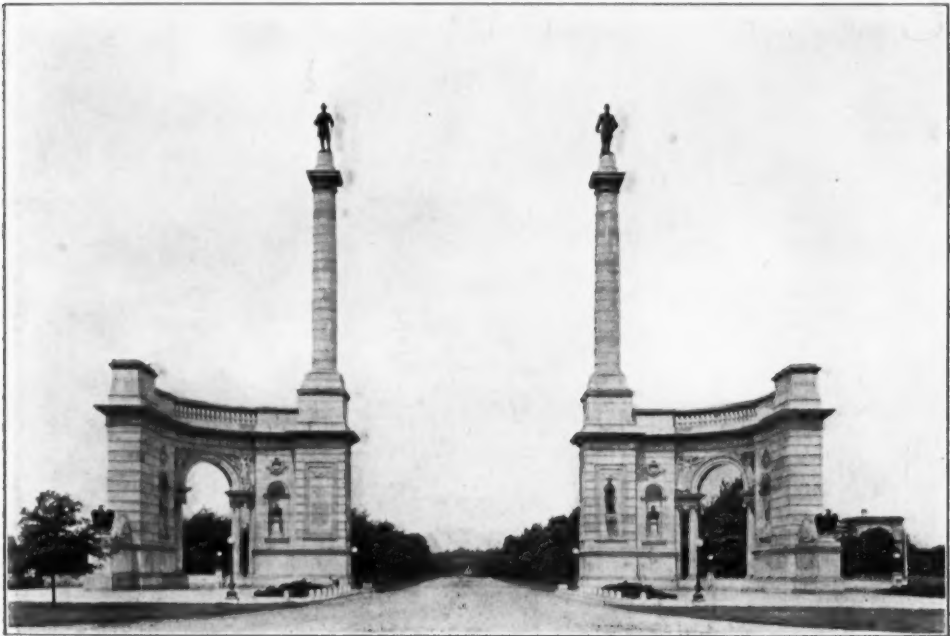
THE MASONIC TEMPLE—CITY HALL SQUARE.



morial Hall, remains; a dignified and reposeful piece of pseudo-classic design. Yet even here the trail of the serpent is seen, for in recent years the simple lines of the low dome have been marred by a golden Liberty Bell, surmounted by some symbolic figure, let us hope, not Art, on such a pedestal.

Near this building rises the Smith Memorial—a monumental entrance hundreds of yards from the real beginning of the drive, on either side of which it

In a recent talk, Mr. C. Howard Walker noted the fact that the things we taste are carefully subjected to law; that steps are taken to save our sense of smell from disagreeable odors; that Chicago has even a society for the suppression of noise; but that our sight, the sense that man would part with last, is continually and everlastingly offended, and we take no steps to relieve matters. Too true. And we have no thought of the debasement of taste in the coming



THE SMITH MEMORIAL ENTRANCE, FAIRMOUNT PARK.

Philadelphia, Pa.

J. H. Windrim, Architect.

abuts, and erected to the memory of certain personages well known in the Civil War, who seem to be placed there to glorify Mr. Smith. This monument is absolutely lacking in taste. Curved exedra-like wings are pierced by large arches, curved in plan; two slender Doric columns rise from this too-high first stage, supporting large bronze generals; and the lack of harmony between these slender vertical members and the heavy horizontal masses below is exceptionally awkward.

generations. Our eyes have grown callous, and the artist who keeps our senses alive to beauty is more often laughed at than revered as a saviour. For the future of American art, let us form societies for the destruction of buildings which otherwise will retard our artistic growth through numberless years.

The buildings of the Colonial period are among the most interesting in Philadelphia. Before all, of course, comes Independence Hall, recently carefully restored. The view of this, seen across

Independence Square, is perhaps the most distinctive note in the city. Unfortunately, the square is surrounded by a miscellaneous collection of business buildings, forming a setting not at all worthy of the most important historical monument in the United States. And the front of the building, set rather close to Chestnut street, has facing it a row of buildings whose diversity is only surpassed by their ugliness. Another sign of the artistic regeneration of the city

soirs carefully cut to represent stone—vulgar beyond measure—the kind of thing that no large store could afford to have in its place. Surely this relic is worthy of a better setting.

One of the early buildings of interest is the Old Sweed's Church, in the south-eastern section of the city. Originally its graveyard swept down to the banks of the Delaware; to-day it is closely hemmed in by factories and train-sheds. Much of its charm must have vanished



INDEPENDENCE HALL, CHESTNUT STREET, BETWEEN 5TH AND 6TH STREETS.  
Philadelphia, Pa.

Andrew Hamilton, Architect.

will be the removal of these buildings, even though on costly ground, and the establishment in their place of a park which will give a proper approach to this almost sacred structure. The interior has been carefully restored, but even here one sees a fearful example of public bad taste. The Liberty Bell stands in a large case,—the framing of the glass sides being of carved (or tortured) wood, forming, at the top, arches where the thirteen voussoirs bearing the names of the States alternate with vous-

as they came. The building is very small, built of imported bricks; a quaint belfry surmounts its small entrance tower, and to the south is an interesting arched porch. The interior is extremely simple, having a plaster vault and a gallery.

Two other Colonial buildings of which the city may be proud are Christ Church and St. Peter's Church. Christ Church, built in 1727, is a fairly rich example of the Colonial church of which St. Philip's, Charleston, is perhaps the



Philadelphia, Pa.

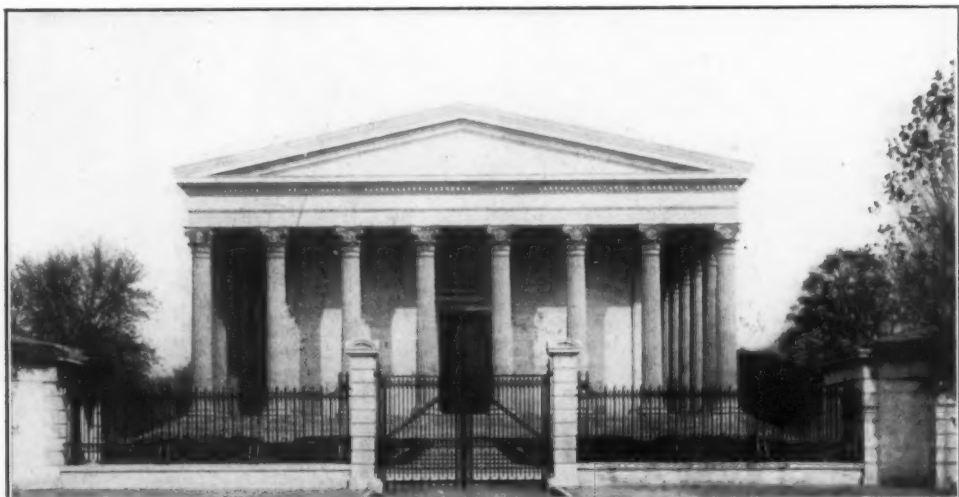
ST. PETER'S CHURCH, PINE AND 3D STREETS.

most beautiful example. Of a fine tone of red brick, it stands in a narrow yard, the rear wall of the chancel rising from the sidewalk; the western face, with the tower on the central axis, has modern business buildings rising within a few feet of it. The present entrance is from the yard through a door in the north side. The interior is of the usual type, with its awkward morsels of entablature between column and arch, Palladian-motive chancel window and high pulpit. The pews, unfortunately, have been modernized, and the modern stained glass windows are not particularly harmonious.

St. Peter's Church, though of a less

and churches of this period which are not uninteresting.

Of modern buildings, Philadelphia has many of the first rank. Unfortunately, they are so scattered that they are quite swallowed up in the general run of mediocre and bad stuff. Perhaps the most important is the completed portion of the Museum of Arts and Sciences of the University of Pennsylvania, by Messrs. Cope, Day and Eyre. The part already built will probably be still more charming when the whole composition is completed. It is, generally speaking, in the Lombard Romanesque style, the "Seven Churches" at Bologna having evidently suggested wall and column



MAIN BUILDING, GIRARD COLLEGE, GIRARD AVENUE.

T. U. Walter, Architect.

ornate type, is, on the whole, more pleasing. It has retained its large graveyard, dotted with fine trees; and its massive tower and simple spire, as seen from the northwest, are wholly charming. The interior is as pleasing as its brown exterior. The original pews have been kept, adding much to the old-time effect, and the placing of the reading-desk at the end opposite the chancel is an interesting and unusual feature.

The main building of Girard College is a fine example of the period; a really splendid temple of marble, which has, of course, no relation to its interior. Philadelphia boasts of a few old banks

treatment. But the style has been handled in no straight-laced archaeological manner, but with a sympathy and freedom that is entirely captivating. It is most emphatically the kind of building that must be lived with to be fully appreciated.

The completed portion shows a small court, open toward the street, partially screened by a high terrace and well-composed steps and gateway. The projecting wings are terminated by small pavilions, while from the central mass projects a bold entrance pavilion, its hooded white marble doorway reached by steps ascending from either side.

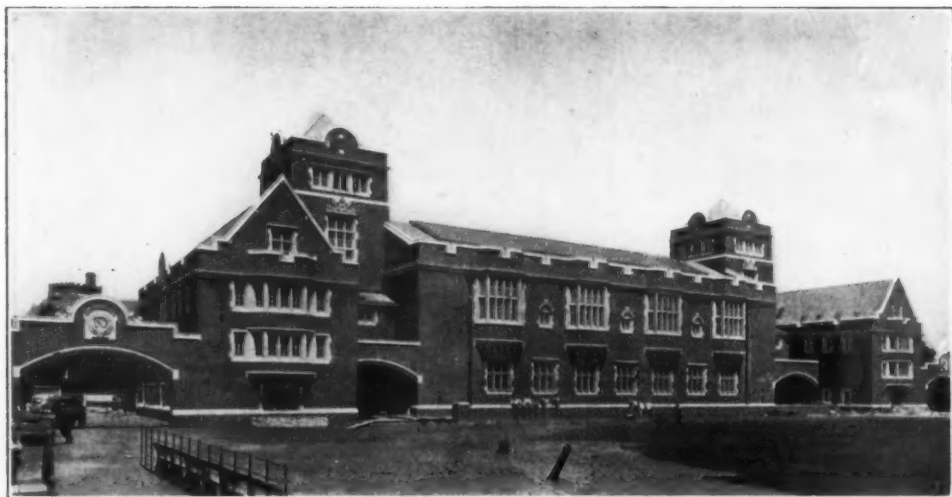


THE U. S. MINT. SPRING GARDEN STREET, BETWEEN 16TH AND 17TH STREETS.

Philadelphia, Pa.

Aiken & Taylor, Architects.

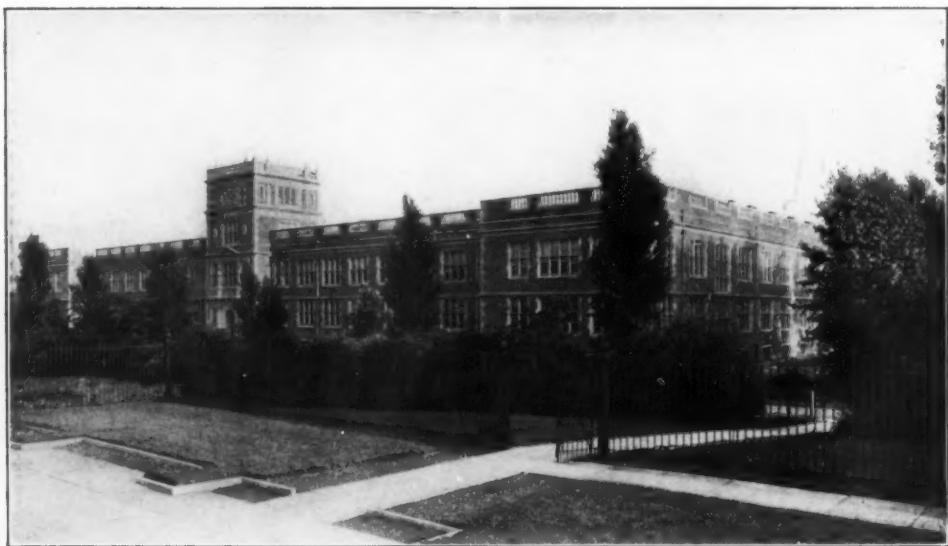




GYMNASIUM, UNIVERSITY OF PENNSYLVANIA.

Philadelphia, Pa.

Frank Miles Day &amp; Brother, Architects.



LIBRARY, UNIVERSITY OF PENNSYLVANIA.

Philadelphia, Pa.

Cope &amp; Stewardson, Architects.



THE BIG "QUAD"—DORMITORIES OF THE UNIVERSITY OF PENNSYLVANIA.  
Cope & Stewardson, Architects.



MUSEUM OF ARTS AND SCIENCES, THE ENTRANCE FEATURE—UNIVERSITY OF PENNSYLVANIA.  
Cope & Stewardson,  
Frank Milles Day & Brother, } Associated Architects.  
Wilson Eyre,

Philadelphia, Pa.

The brickwork has been handled in an exceptionally clever manner. The effect of long Roman brick is obtained by joining two ordinary bricks with a touch of red mortar, and carrying about this a very wide grayish-yellow mortar joint. The columns and mouldings are of moulded brick; bands are formed of vertically or diagonally set bricks, and spots of interest result from the use of varicolored marbles set in patterns of great charm and variety. The use of white marble for capital, capstones and cartouches is masterly in its reserve, and the carving on the cartouches of great beauty. The glare of the white marble has been removed by the use of a yellow stain (perhaps excusable in a land where ready-made antiques are so numerous), and even the walks and pavements are made harmonious with a dull red tint.

If any adverse criticism of this building could be made it would perhaps be of the windows. Having to light a museum, they are filled with large sheets of glass, whose plain surfaces form an unpleasing contrast with the rich texture of the walls. And this opens the wide field of discussion as to the relation of style to function—a difficult and purely modern problem. Across a street from and at right angles to the Museum rises the University Gymnasium, by Mr. Day. It is of red brick, with creamy terra-cotta string courses, etc.—in the Tudor style; a symmetrical building, well placed upon terraces, and equally effective from the street fronts and from Franklin Field, where it forms an imposing end to the banks of seats on the other three sides of the athletic field. A recently erected dial on the façade toward the field, where the numerals proper to a clock are replaced by the twelve letters of the word Pennsylvania, is in doubtful taste.

A few blocks further west are the dormitories, by Messrs. Cope and Stewardson. The site might be defined as being composed of a square with a right-angled triangle placed against one side. The long masses of buildings which outline these two geometrical forms are broken in a most interesting manner,

and a considerable difference in level between the "Big Quad" and "The Triangle" is used in a very effective manner. The style chosen is a free adaptation of the early English Renaissance, the material being a pinkish brick, with a good deal of white stone with much clever carved work. The choice of this style has been adversely criticized; but setting aside the question of the beauty or fitness of this rather than some other style, it must be admitted that the buildings are very effective. It would be interesting if the critics would come forward and tell us what would be the logical style for the dormitories of an American university.

Horticultural Hall, by Mr. Day, is a straightforward piece of design, interesting in its use of color; a richly painted frieze under the wide projecting roof is as an oasis in the drab desert of the city. On Seventeenth street rises an interesting Baptist church, of a general Romanesque type, by Mr. Seeler. Its position, on the corner of two narrow streets, with incongruous surroundings, injures the effect very decidedly. Internally it is a harmonious mass of golden-brown and red-gold tones; the scheme is that of a dome on pendentives, with galleries under three of the supporting arches.

The new United States Mint, on Spring Garden street, by Messrs. Aiken and Taylor, is a restrained piece of classic Renaissance design (what does one call a building that is neither Roman nor Renaissance, and yet much of both?). Near the City Hall is being completed a very refined, classic white marble structure by Messrs. McKim, Mead & White, which one is surprised to learn is neither a church nor a library, but a bank for the Girard Trust Company: a throwing away of a splendid chance to further the cause of logical design. Near by, on Chestnut street, by Messrs. Price & McLanahan, is an interesting store-front, in the detail of which the influence of the University Museum is felt, though the proportion of voids to solids is, from the nature of the building, unpleasant. The Lyric Theatre, with a classic façade and a too-classic

interior, the new Elks building, and the St. James Hotel, the last two of the French school, are worthy of note.

As Philadelphia is called the City of Homes, an extended review of her residences might be expected. But, if it may be so stated, the most interesting

the general aspect. And, particularly in the newer portions of the city, blocks of houses are being built by the score, which for cheap pretentiousness and benumbing ugliness have rarely been equalled. Here is a field of labor for the philanthropist and the artist with an eye

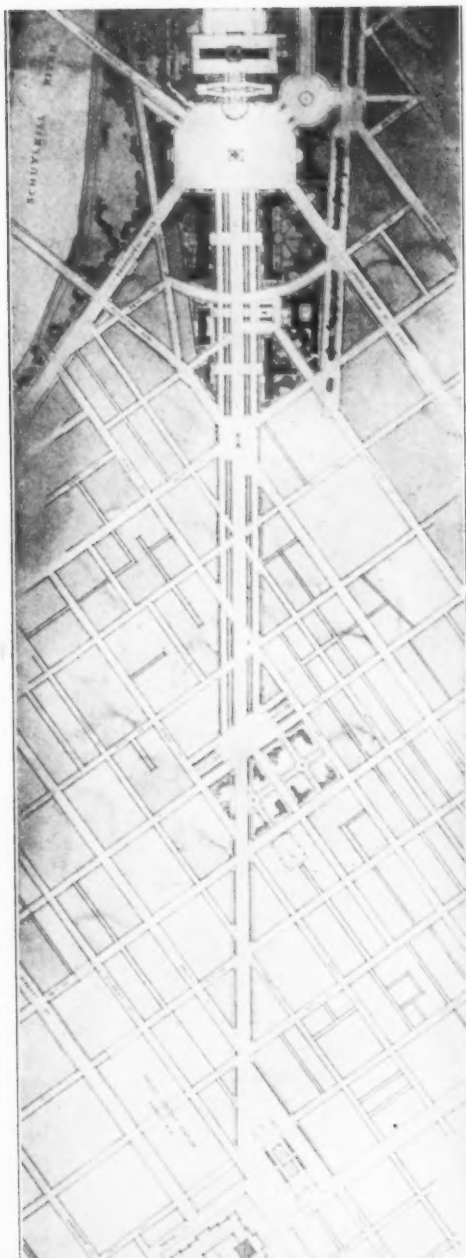


THE PHILADELPHIA PARKWAY, AS PLANNED FOR THE FAIRMOUNT PARK ART ASSOCIATION—BIRD'S-EYE VIEW.

Horace Trumbauer, } Associated Architects,  
C. C. Zantzinger, }  
Paul P. Cret, }

of the city's residences are outside of it, and an examination of the many and beautiful suburbs would lead us too far afield. In the city proper, though there are several residences of interest, they have hardly any appreciable effect on

to the future city beautiful: let them look to the housing of the small rent-payer. Living in such a dwelling must be as fatal to the development of a sense of beauty as the contemplation of the aforementioned Smith Memorial.



THE PHILADELPHIA PARKWAY, AS  
PLANNED FOR THE FAIRMOUNT  
PARK ART ASSOCIATION—PLAN.

Horace Trumbauer, } Associated Architects.  
C. C. Zantzinger, }  
Paul P. Cret, }

Returning to the subject of the general impression given by the city, it must again be stated that Philadelphia lacks effectiveness. Of the buildings mentioned, only St. Peter's, the Mint and the Gymnasium of the University of Pennsylvania have any kind of a setting. Placed upon narrow streets, hemmed in by unrelated structures, they cannot but fail of effect. Comparing our cities with those of mediaeval Italy, for example, we feel that the people of those almost Dark Ages were far ahead of our "enlightened" citizens; there every public building has its proper setting. We, instead of crying out upon such things as are done to-day, merely shrug and say: "Too bad, but anything else is quite impracticable." Where is the Peter the Hermit who will arouse us to a crusade against the unsightliness of our cities? But Philadelphia is to have a chance. Fairmount Park, before mentioned, lacks any adequate approach from the centre of the city. So buildings are now being demolished to make way for a great boulevard which shall open a spacious drive from the City Hall to the nearest point of the park, at Spring Garden street. It is proposed to have an imposing entrance to the park, the possible placing of an art gallery upon the high reservoir site being an interesting feature of the scheme. The boulevard is to be planted with trees and ornamented with fountains and statues. But as yet the most important thing has not been done. No restrictions have been placed upon the buildings which will line this great thoroughfare. And there Philadelphia has the chance to make or mar her artistic reputation. Should some limit of height, some restrictions as to color and style be imposed, there is a chance of having a vista which will rival the Champs Elysées or the new Mall in Washington. One can picture such a street, lined with stately buildings, where the uniform cornice line is pleasingly broken here and there with well-placed tower or dome, where the color is varied enough to save it from monotony while harmonious enough to preserve the effect of general uniformity. In such a street,



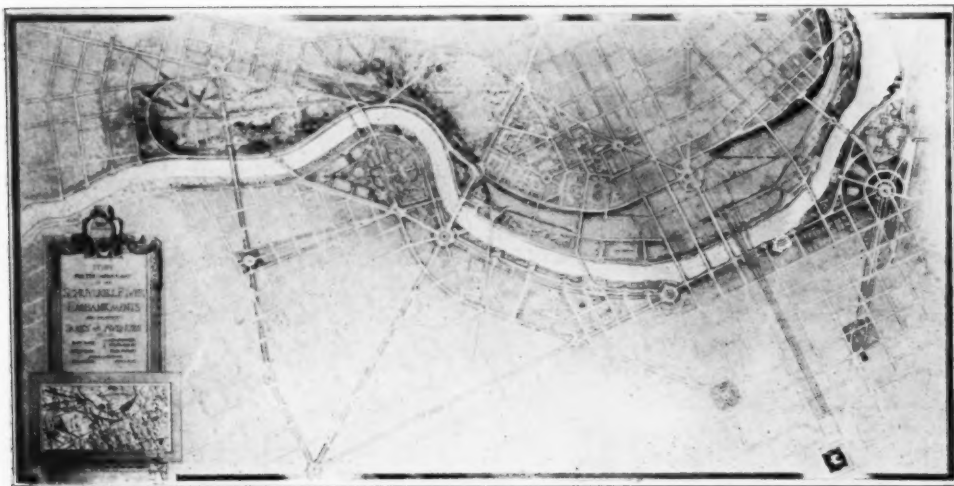
in such a vista which would impress the visitor, the city would have a money asset of very real value, an advertisement surpassing any other she could put forward. And all at no extra cost! Simply by restricting the property: by sacrificing the vagaries of Tom, Dick and Harry to the aesthetic welfare of the rest of the citizens.

But perhaps the idealist has no place in this modern world of ours. And we can see, in our mind's eye, this parkway

as it may perhaps materialize. Here a cloud-kissing apartment house, there a modest two-story Colonial building; on one side a pink granite bank, on the other an *art nouveau* store flaunting its gaily colored terra-cotta monstrosities in the face of the world. And at the end, William Penn, on his five-hundred-foot pedestal.

Heaven help Philadelphia in her judgment in this matter!

*Huger Elliott.*



STUDY FOR THE SCHUYLKILL RIVER EMBANKMENTS AND ADJACENT PARKS AND AVENUES.

Philadelphia, Pa.

Architects: C. C. Zantzinger, } East Bank.  
C. L. Borie, Jr., }  
Architect: Paul P. Cret, West Bank.

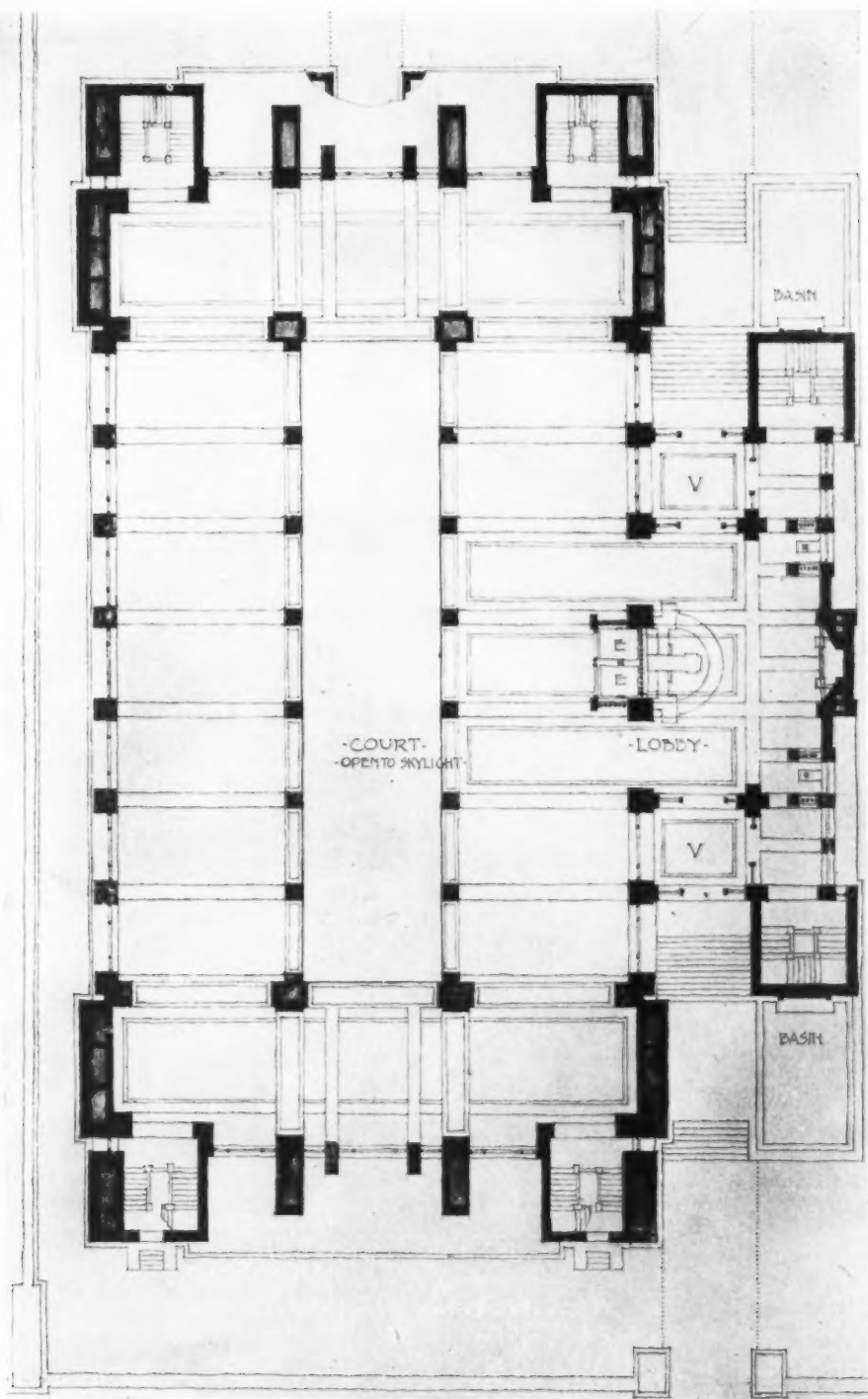


FIG. 8. LARKIN BUILDING—MAIN FLOOR PLAN.

Buffalo, N. Y.

Frank Lloyd Wright, Architect.

## ↓ The Larkin Building in Buffalo

This business building, the architectural creation of Mr. Frank Lloyd Wright of Chicago, is reproduced in many excellent photographs, some of which will be shown in this article and others in the March number of the *Architectural Record*. From among them I select Fig. 1 as the most capable of giving a general idea of the design. The plan given in Fig. 8 shows the purpose of each member of the building, and the scale can be estimated as to the heights, on the basis afforded by the steps of the entrance doorways, checked by the height of the doorway (seen in Fig. 1) themselves, and by comparison with the plan. It is not safe to utilize the courses of brick in this way, because their height is uncertain; the bricks may be of unusual dimension or laid with unusually wide joints. The nearest tower-like mass in Fig. 1—that against which the telegraph pole is seen relieved—is about 90 feet high. The broader mass behind it would be, then, about 110 feet high, and this appears to be the highest level of the walls. A perspective draughtsman can easily determine the relative proportions, as width compared to height, etc., but this front may be taken, in the absence of any figure dimensions on the plan, roughly as 90 to 95 feet in width, not, of course, including the north wing seen in Fig. 2.

That front shown in Fig. 1 is called in this paper the east front. The longer side, showing in the same picture seven windowed bays divided by square buttress-piers, is called here the south flank.

It is possible to gain some knowledge of the character of the building by means of photos of the interior. Twenty excellent interior views are found in the collection above mentioned, and Fig. 3 shows how the building has a nave and aisles—the nave shown in the illustrations having windows at the ends, and a skylight overhead; each aisle is divided up into four lofts or stories of 16 to 17 feet each, in the clear. The broad end windows, seen in Fig. 3 at the end of

the great hall, are the same windows that show in Figs. 1 and 2 between the buttresses, and they correspond with the arrangement of the south front, as in Fig. 1—note the four stories of broad windows flanked by narrower ones, which are seen within and without alike. One relation between exterior and interior is seen in this—the square brick piers which divide what we here call the nave from the galleries at each side—a long double row of them are on the same axes as the buttress-like piers crowned by globes and human sculpture, in Figs. 1 and 2.

In Fig. 3 there are partly seen the large galleries, at the left and at the right hand of the central skylighted nave. These halls are of only moderate height—one story of windows to each, as seen in Fig. 4, which gives the interior of the fourth story, south side. Each one, as well as the floor of the high nave, is filled rather closely with desk-tables, at which are seen seated clerks fully occupied in their employ. In this view, we are looking eastward, the window on the left and in face of us are those seen from outdoors in Fig. 1, and the central nave is north of us, on our right.

The western end of the building is very closely like the east front; but the northern side as shown in Fig. 2 is masked by projecting masses of building which include a great vestibule with entrance doorways to east and west. In the northeast detail view, Fig. 5, the doorway at the head of the steps where a young man is standing is one of those two entrances; it has the firm name on the large fan-light, and is probably the working entrance. The plan shows a similar doorway at the west of this one, and opposite to it. The houses of the town and a church crowd the site rather closely on the northern side.

The square towers at either end and flanking the entrance in Fig. 5 are about 18 feet in horizontal dimension. That one seen in Fig. 5 has the overplus of water very skilfully treated as a cascade

with a sculptural setting. The two outer towers, seen in Fig. 1, have small doorways, with steps of approach. These are ventilator and stairway towers, and that with the fountain contains also a staircase.

In tracing the analysis of this build-

one from the traditional styles and schools feels a shock of surprise, and this a surprise which is the reverse of pleasant. Few persons who have seen the great monuments of the past, or adequate photographs of them; who have loved them and have tried to surprise their



FIG. 1. LARKIN OFFICE BUILDING—REAR.

Buffalo, N. Y.

Frank Lloyd Wright, Architect.

ing through all this pile of photographs, and in setting down, as above, its scheme, we have also partly prepared ourselves to judge of it as a work of architecture. The lover of architecture who looks, perhaps for the first time, at a building so entirely removed as this

secret of artistic charm, will fail to pronounce this monument, as seen in Fig. 1, an extremely ugly building. It is, in fact, a monster of awkwardness, if we look at its lines and masses alone. It is only capable of interesting that student who is quite aware that the architects of

the modern world during fifty years of struggle have failed to make anything of the old system—the system of following the ancient styles with the avowed purpose of developing some one of them and going on to other things.

For such a task, the as yet unperformed duty of making comely a hard working and economical building, the designer might feel that Roman colonnading was out of the question, as extrava-

time have filled our cities with such an array of feeble school studies, based upon plans good in themselves but powerless to suggest an architectural treatment of the whole, that he will have none of that pseudo style.

Admitting, then, that the chase of the Neo-Classic, of the Gothic, of the French Romanesque, has come to nothing, that we are as far as we were in 1850 from a living style of architecture, and even

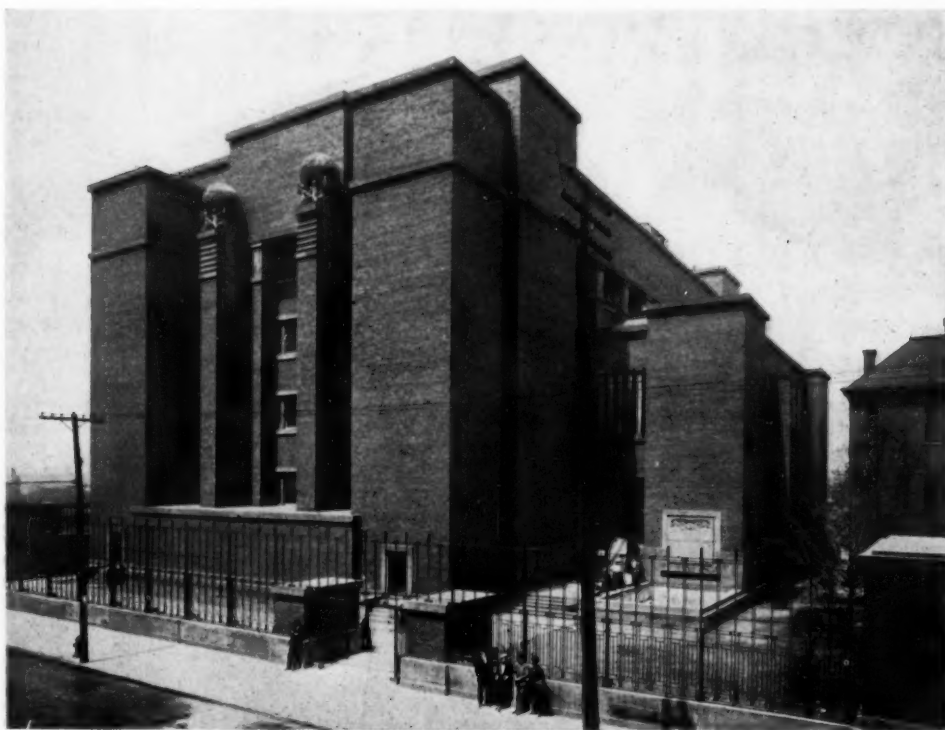


FIG. 2. LARKIN OFFICE BUILDING—FRONT.

Buffalo, N. Y.

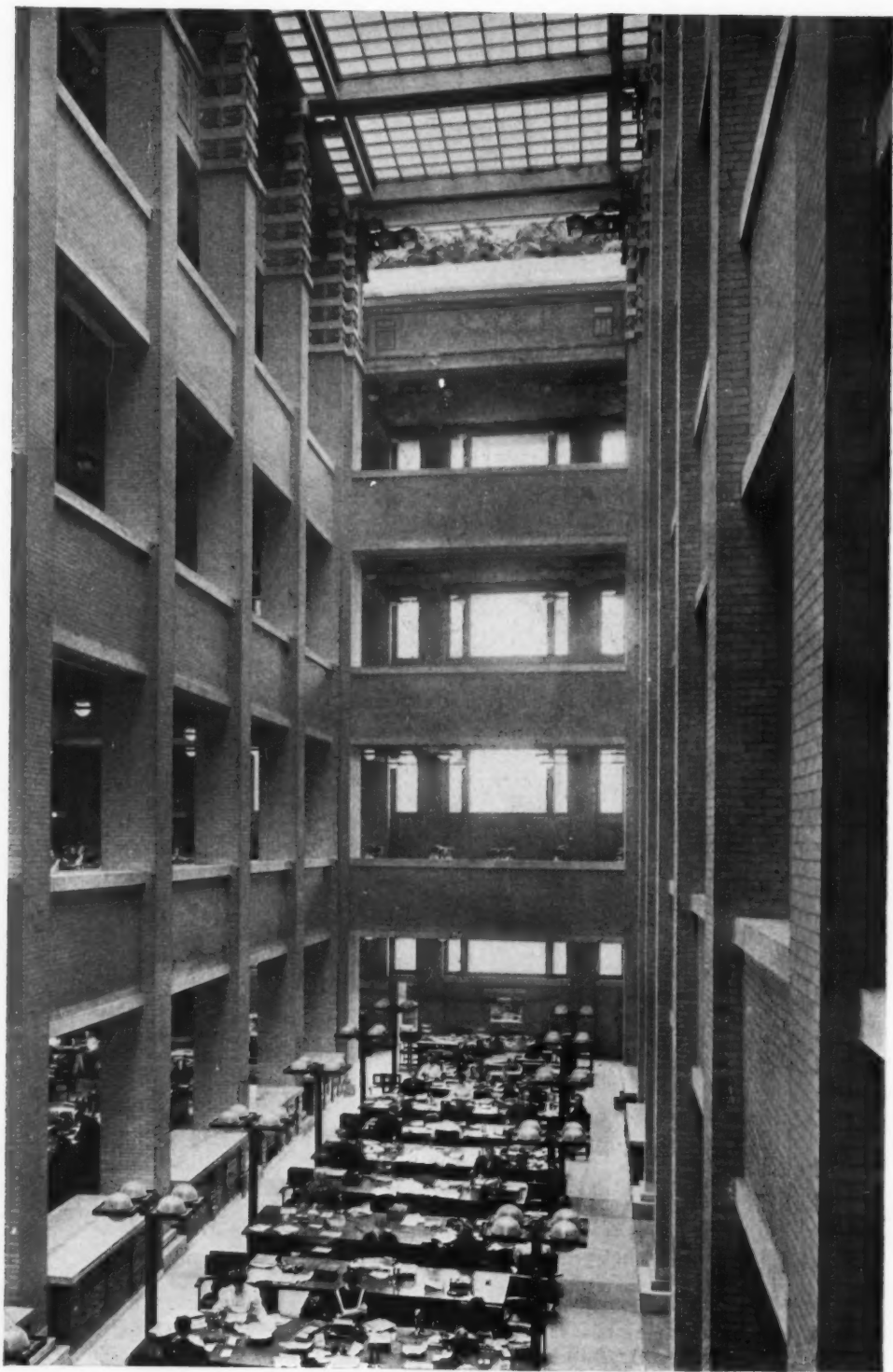
Frank Lloyd Wright, Architect.

gant in cost and waste of space, and the frankly arcuated styles of the Middle Ages unavailable for similar or equally cogent reasons. He might find his only available suggestion from old times in the seventeenth century Italian, and the eighteenth century French palaces—in styles which depended upon fenestration. And then he might well say that he was tired of seeing imitations of those monuments; that the popular and successful architects of the

from anything which is worthy to be called architecture at all, when a large mass of the work of a period is taken together, we shall find that the building we are considering puts on a new aspect.

Do we find in this building none of those familiar motives—those accepted details which are architecture for us? It is because the designer of this building was determined to furnish nothing which his practical requirements did not call for. Is there no visible proof? It is be-





Buffalo, N. Y.

FIG. 3. LARKIN BUILDING—CENTRAL COURT.

Frank Lloyd Wright, Architect.

cause a flat roof is just as easy to make tight and durable, with modern appliances of building, and because a swarm of skylights and other utilitarian openings are better and more easily accommodated in and upon a flat roof. As there are no chimneys, giving an opportunity for an agreeable breaking of the masonry into the sky and the sky into the masonry? It is because there are no separate fires, each fire requiring its own flue, and that

and because it seems a feeble thing to do—to break up the arrangement of windows *merely* for the sake of pretty proportions. Are the grouped rooms and closets of utility arranged, even at the expense of the building, by thrusting forward their crude masses to mask and distort, what might have been the effect of the main structure, all as seen in Fig. 2? That is because this is to be an economical, working building, the offices of a great business house, and because it

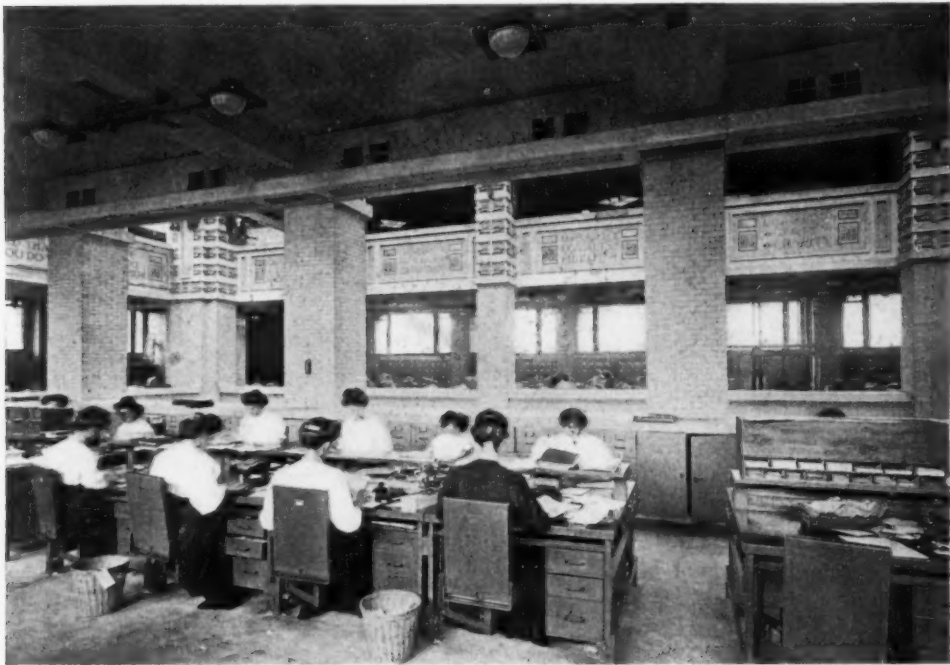


FIG. 4. LARKIN BUILDING—FOURTH STORY GALLERY.

Buffalo, N. Y.

Frank Lloyd Wright, Architect.

flue carried well above all obstructions. There is probably one fire, and one only, in the building; moreover, that one fire is driven by a forced draught and requires no tall chimney shaft to make it burn. Is there no system of fenestration—the windows, and therewith the doors, showing in pretty groups or in long-drawn sequence carefully balancing one another? That is because the building consists of five equal stories, used for similar purposes; divided generally into long, unbroken halls—lofts, in short;

was thought well to be resolute in the chosen way and not to pretend to build a monument of architecture when a working structure was desired.

It is, indeed, quite certain that in New York the newly erected business building at the corner of Wall Street and Broadway, shown in Fig. 7, is more nearly like what a business building ought to be than the elaborated and delicately detailed skyscrapers around. It is certain that nothing is gained to architecture by trying to make a business

building architectural in the good old sense. The fine arts have nothing to do with the hustle and bustle of daily bread-

fine art and active mercantile pursuits are mutually exclusive. If you are to enjoy a work of art you must have lei-



FIG. 5. LARKIN OFFICE BUILDING—DETAIL OF ENTRANCE.

Buffalo, N. Y.

Frank Lloyd Wright, Architect.

winning operations. Those are hostile influences, as Ruskin pointed out much more than half a century ago; or it might be urged with still greater force that

sure and a quiet mind; if you are to produce a work of art you must have peace and a single mind. In neither case will it do to have hanging over you the

peremptory calls of the money-making organization—not one paymaster, who might perhaps forget his utilitarian requirements in the light of design and the joy of creation; but the commercial enterprise which can have no enthusiasm and no care for finer things than commerce.

We are left, then, with our sympathies enlisted in Mr. Wright's behalf, to consider what else might have been done,

light and shade, the production of graceful and simple combinations of light and shade was their chief aim. A thought in architecture is generally a thought in light and shade.

When the great buildings of the world were designed everything else which was capable of design received it; and all design in pure form, as in sculpture, in relief modeling, in grouping and massing, is design in light and shade. The simple

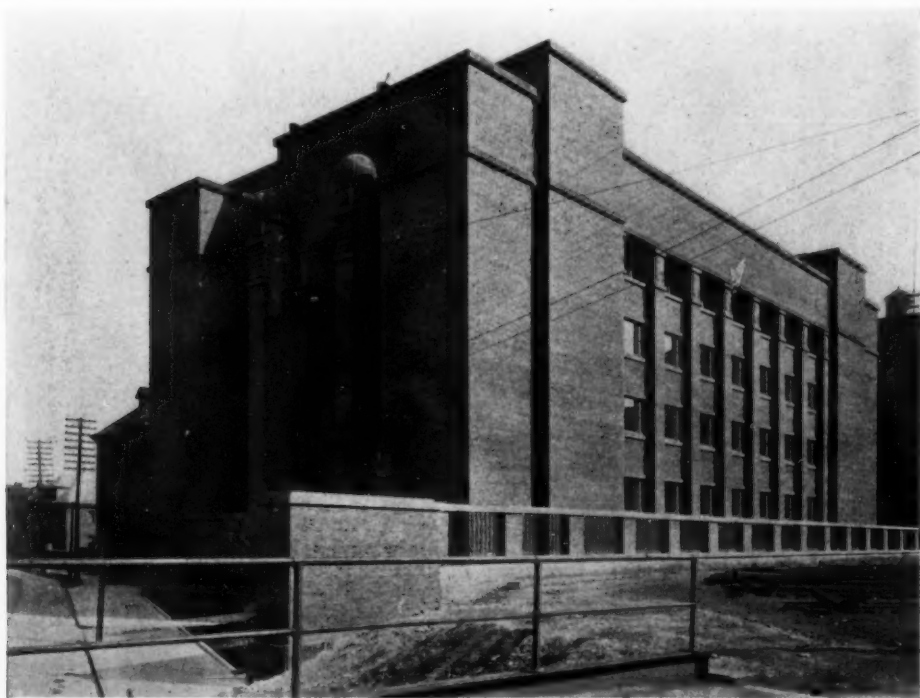


FIG. 6. LARKIN OFFICE BUILDING—REAR.

Buffalo, N. Y.

Frank Lloyd Wright, Architect.

had the architect felt that he could not bear to turn out a building so ungainly, so awkward in grouping, so clumsy in its parts and in its main mass. Rejecting all that older styles have to offer us in the way of construction and in the way of detail, we may still ask, How did the designers work when men knew how to design? What, apart at least from the unconscious following of the style accepted during this period was their main object? They sought for light and shade. The interesting treatment of

requirements of every-day life were met by the maker of vessels and utensils with as free and as successful a method of designing as the requirements of state and of religion; and he worked in form principally, that is, in light and shade. Earthen vessels and metal utensils were gracefully designed. And all this not because the maker cared greatly to produce a decorative object, for he also was dimly conscious of the fact that it was hardly worth while to waste design on a working tool, but because it was in-

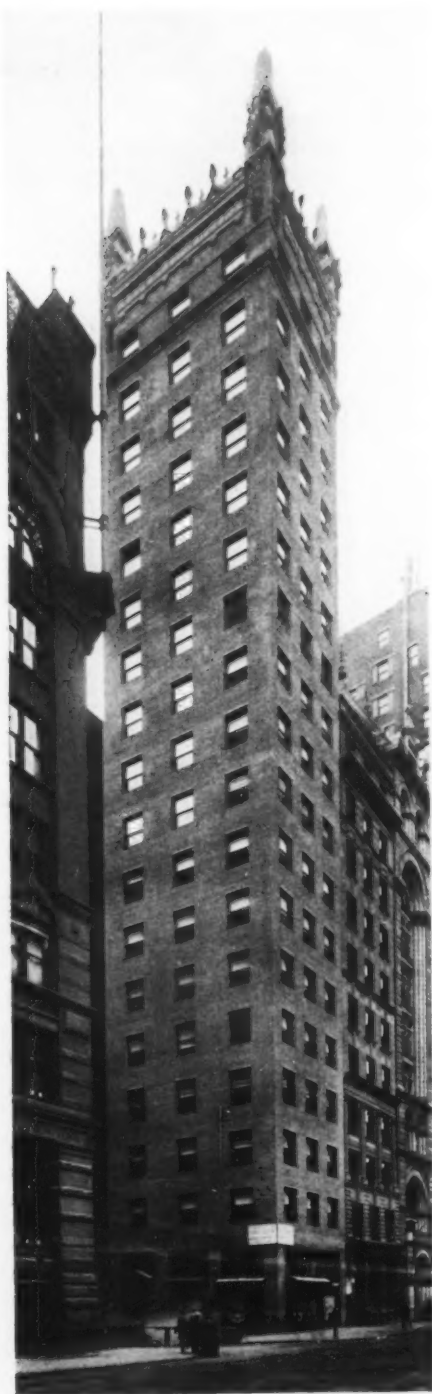


FIG. 7. NO. 1 WALL STREET BUILDING.  
New York City.  
Barnett, Haynes & Barnett, Architects.

evitable that a man who did fine things on a Monday would still do comely things on a Tuesday. How can you make a clumsy and an awkward thing if you have made graceful ones for forty-eight hours on end? It is a blessed trait of our nature that good habits as well as bad habits may be formed and will stick. And so the designs of a good time for architectural art are sure to be good designs, that is, to have such forms that the light and shade upon them would be lovely. The design before us could not have been made by any able man at a time when there prevailed a worthy style of design in the world around him.

One may try, comparing these seven or eight views of the exterior—one may try the experiment of familiarity to see whether with longer acquaintance the building is less ugly than it seems at the first look. Ruskin tells the story of his having been led astray by the theory of Use and Wont—by the notion that our liking for certain forms and colors is the result of familiarity, and nothing else, and he says that he kept a skull on his mantelpiece for months, but found it just as ugly when the months had passed. And so it is in all probability with this exterior. If we are to consider it as a piece of abstract form, as a thing which is itself ugly or the reverse, the opinion will remain fixed that nothing uglier could exist among objects that were found perfect in condition, cared for, and showing the signs of human thought and purpose. We should see in a moment that where such qualities as those are found to exist, the building cannot be wholly contemptible. That it is wholly repellant as a work of human artistry which might have been a work of art and is not—so much is probably the verdict of most persons who care for the fine art of architecture.

Light and shade have been mentioned above as the chief elements in our art, and one of the ways in which light and shade are used continually in architectural design is in the way of moldings. What is a molding? What are moldings? It is, they are, a modulation of the surface following continuous lines, straight and curved. Moldings are an abandonment of plane and uniform surface for a



broken and generally rounded surface, as along an edge, and a group of moldings consists of an alternation of projecting and retreating forms, mainly of curved surface and of small dimension, although these are broken, interspersed here and there by narrow strips of flat and uniform surface, which we call fillets. Moldings do not weaken the wall where the window jamb, the door jamb, the horizontal cornice or sill course is modified by their interposition. Suppose, for instance, that one who lived opposite this Larkin Building were to have his way for a month, and were to utilize his time in making the building less clumsy in his eyes—would he not begin by molding those square corners which are thrust upon us so sharply in all the exterior views, working those corners into upright beads and coves, developing, perhaps, in an angle shaft with capital and base? This, of course, is not an essential feature. To insert it would be to give, perhaps, too nearly mediaeval a look to the design. Suppose that the corners of one of those tower-like masses were molded to such an extent that eight inches on each side of the arris, everywhere, were to be reduced to a series of soft surfaces, concave and convex, parallel one to another, and carried up from a little above the base to a little below the coping? They may be cast in brick, two or three separate patterns of molded brick sufficing for the whole composition. These moldings must either stop or return; and there are very interesting ways of arranging for either. They may stop against the stone coping or belt course itself; or they may have a piece of cast brick or of terracotta or of cut stone, in the mass of which the stop of the groups of moldings may be against a splay or a concave or a convex curved surface.

Moldings are important and valuable, and the designer who rejects them altogether handicaps himself—and yet there are even better things than moldings. The horizontal bands in a building like this would be interesting if they were molded; and yet they would be more interesting still if they were carried out in some greater projection in the face of

the building and supported on corbels or on a little arcade. But it is evident that the first principle laid down by the designer for his own guidance was this—to avoid everything that would look like a merely architectural adornment, to add nothing to the building for the sake of architectural effect. He would repel the idea of a projecting cornice as readily as he would the full classical entablature for the top of one of these square towers, which would be no better working elements of the building if they were so adorned. Either you must add to a building something which is unnecessary, and which nothing but existing tradition even suggests to you, or you must have a bare, sharp-edged pile of blocks—a group of parallelopipedons like this. The designer seems to have said that even the rounding off of the coping shall be eschewed. He has determined that the square corner, the right angle, the straight edge, the sharp arris, the firm vertical and horizontal lines, unbroken, unmodified, uncompromizing in their geometrical precision—that these and these only shall be the features of his building. But as that characteristic of the building prevents it from having any delicate light and shade, therefore it stands condemned in the eyes of any person who looks at the building asking for beauty of effect.

There is, however, mass. There is the possibility of proportion, the proportion of the smaller to the greater, and the possibility of fitting one to another firmly and with grace. There is the proportion obtainable by the horizontal distribution, the alternating of curtain walls with towers, of projecting and receding masses; and there is the possibility of vertically succeeding masses, the parts which serve for a kind of basement at either end, and those towers and buttresses which rise above them. There is even a possibility of contrast between walls filled with windows and the massive blank space of the wall which rests upon the piers between the windows.

If, now, we seek to take up a sympathetic position, to consider the building as perhaps the architect himself consid-

ered it, there are to notice the care given to the plan and disposition of the halls and rooms, the care which has evidently resulted in a successful utilitarian building. Construction which is the simplest and most obvious, and which cannot go astray because everything is reduced to the post and lintel; workmanship which is faultless, simple and straightforward brickwork; piers and walls fairly and smoothly built; slabs and beams of stone which have been planed and dressed in the mill and left with sharp arrises; a view down the central hall as seen in Fig. 3, which is impressive because of the straightforwardness and simplicity of everything, and because of the clear daylight which fills all parts of the hall; the evidences which the pictures multiply of a minute prevision in the way of office furniture, safes and cupboards for filing papers, tables and chairs of metal and solid wood, all of the simplest conceivable forms; the electric bulbs set in racks at a convenient height above tables and counters, which racks, though of inconceivable ugliness, have yet the character of simple utility—all these things unite to make a building which no one can fail to accept. The iron railing which encloses the site comes nearer to being really a design than the larger details, generally; for in this a true economy and a sagacious utility take the place of a sense of form. Our standard is lower, when we consider some hundreds of running feet of fencing.

And so in the exterior it is allowable to the student to feel that a square brick shaft is as fit to contain a winding staircase or an elevator as a round or octagonal cut stone shaft costing five times the money; that windows are not absolutely necessary when there can be a skylight: and that where there are no windows, and no breaking up for windows without necessity, the result is inevitable—the result that there will be no pierced parapet nor any modifying of the uppermost story to replace in a way the cornice which, of course, such a building does not require. Here is a well-thought-out design, every detail of construction and all the appliances have

been studied with care. Here is an excellent arrangement of large windows, raised high toward the ceiling, broad and low and shaped as they ought to be for utilitarian results. It is clear that there is nothing to burn about the building; it is as fireproof as such a building can be made. And while everything has been carried out with a view to practical utility, there has been also some attempt to adorn, to beautify. But we have already seen reason to think that this attempt has failed. See for the attempt and for the failure, in Fig. 8, that curious base arranged beneath the brick piers on the right; it is the Attic base reduced to its simplest form, the familiar old Attic base, with its rounded moldings turned back into the square-edged bands which those moldings were in their origin. And those square moldings are put in, the larger below and the smaller above, with the evident purpose of serving as ornament. Accepting this, let the eye now take in the curious square block decoration of the same pier in its upper part, higher than the door and between the great doorway of the entrance where the firm name is painted on the glass, and the small staircase doorway on the right. Is this a serious attempt to create a new system of design? May we assume that the inevitable squareness of the brick-built pier, all molded and specially cast brick being rejected, satisfies the designer so well that he gladly makes everything else, his sculptured ornaments and his bronze fittings, as square as the masses of brickwork? Look, then, at the system of metal frames in which the electric globes are suspended. From this picture go back to Fig. 3 and study those straight-edged and sharp-cornered groups of ornament at the tops of the great piers, and directly below the skylight see those square ornaments which are clearly nothing but ornaments. Fig. 4 shows two groups of those extraordinary connections—those terminals of the great supporting piers at the end of the high nave opposite the one shown in Fig. 3. It is unnecessary to describe the design of these strange masses of square-edged patterning; no human designer could make anything graceful or even

anything effective out of such elements as those. Taking all this accumulation of strange, sharp-edged solids, offering no modulation of surface—nothing but sharp contrast and checkered black and white—and the wonder will grow upon you more and more, how such a costly, careful, thoughtful, well-planned building should be made up of such incongruous parts, leading to such a hopeless result.

One cannot help liking broad surfaces of fair brickwork, and yet those very masses of brickwork may be so much more interesting; they may be invested with color. There is the third chance for the designer! After light and shade have escaped him, or have been rejected, deliberately, and when the artistic use of mass and proportion are out of the question, he has still at his disposal the interest and charm of color, and this exterior calls for it loudly. The careful brickwork, even as it is, has a certain momentary pleasure to offer those of us who feel dissatisfied with the flimsy character and the inappropriate ornament of the buildings around. Such a pleasure lasts but an instant,

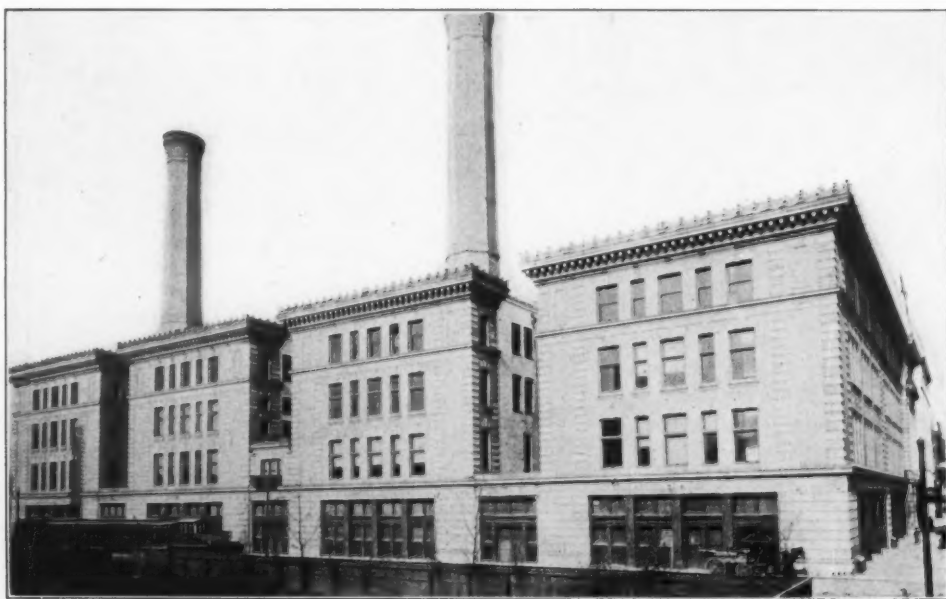
however. You turn from the florid façade to the plain brick gable wall or rear with a sense of relief, but it is merely an instantaneous pleasure which you feel in escaping from something painful. If we are to look at the building a second time, and that with renewed pleasure, we must have something else; and, where delicate play of light and shade is denied us, as here, variety of color pattern would be an admirable expedient. It is not necessary to expatiate on this view of the case, for any one who has ever made patterns in mosaic or has enjoyed the patterns that others have made for him will see what a pleasure this building might have been to the designer and to the student, had its grimness of aspect been modified by color patterns. Even the simple stripes found in the wall of that New York apartment house which faces on Fourth Avenue and East Sixty-eighth Street, three horizontal courses of dark brown brick, one of scarlet brick, and so on, in alternation, even that is beautiful. More elaborate, more effective combinations might be made where colored bonds pass through—cut across—groups of moldings.

*Russell Sturgis.*



PUBLIC SERVICE CORPORATION BUILDING—VIEW OF FRONT.  
Milwaukee, Wis.

H. J. Esser, Architect.



PUBLIC SERVICE CORPORATION BUILDING—REAR VIEW, SHOWING THE GREAT  
POWER STACKS.  
Milwaukee, Wis.

H. J. Esser, Architect.

## The Building of the Public Service Corporation of Milwaukee

The Public Service Building of the Milwaukee Electric Railway and Light Company has a peculiar interest because of the many different purposes to which it is put. Below its roof is conducted practically every kind of business directly or remotely involved by the work of a large public service corporation.

The president and general manager of the Milwaukee Electric Railway and Light Co., Mr. John I. Beggs, decided that his company could conduct the greater part of its business with as much economy from one centrally situated building; and he believed, also, that the habitation of such a building would help to make the company more important in the public eye. He decided, consequently, on the erection of a structure containing space for every department of the company's business, and that this structure should be designed to make an adequate impression on the public. To this end he called to his assistance an architect, Mr. H. J. Esser; and the building, as it stands, is the result of the co-operation of these two gentlemen. Under its roof are carried on a greater variety of occupations than in any other building in the country. It contains a waiting room, a train shed, a power house and rooms for every different department of the company's auditing and essential business. Nor is this all. It is planned, also, to contain a large auditorium, reading and club rooms for the entertainment of the company's employees and a gymnasium. Thus it has its social, in addition to its business, purposes. It is in its way a club house and a theatre, as well as an office building and a power house; and it performs all these services in a very efficient manner.

The structure covers the area of one whole city block, and a good-sized one at that, being bounded by Sycamore, Everett, Second and Third streets. Its location is central, being only one block from Grand avenue, the business centre

of the city, immediately adjoining the Union Depot, and very near the most important steamer and passenger dock. Although only four stories high, it is of steel construction; but if at some future time it will pay to enlarge the building, the frame is strong enough to carry a number of additional stories.

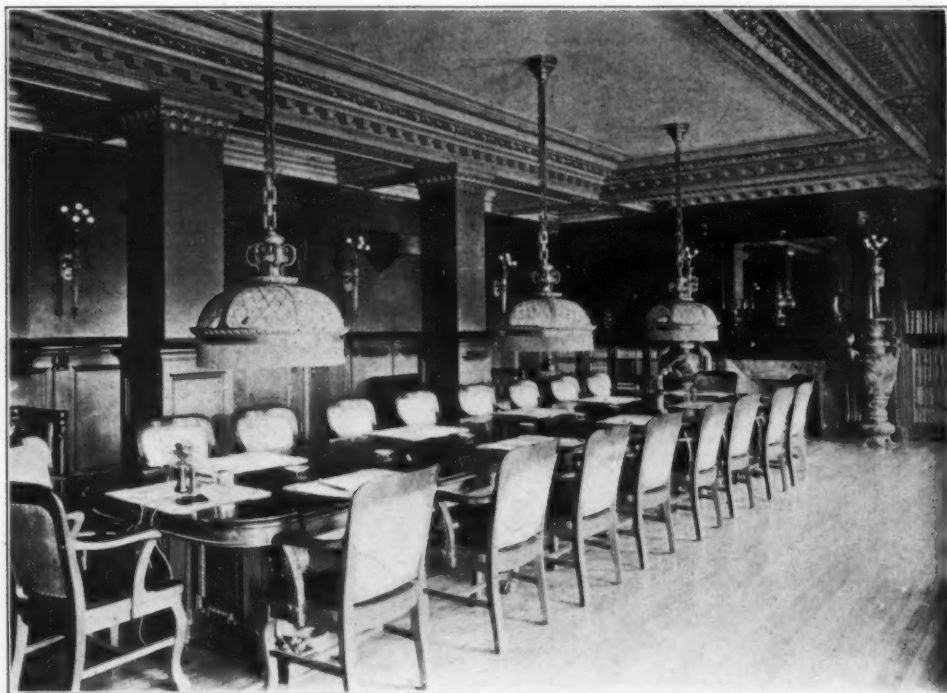
In the basement is installed not only all the machinery needed for the building itself, but also all the boilers that supply the Milwaukee Central Heating Company with its steam, as well as the extensive storeroom of the sales department. On the first floor are located the main entrance, the sales and exhibit rooms of the lighting department, the interurban waiting room and the extensive car sheds of the company's interurban system. On the second floor are the offices of the accounting and transportation departments, the latter having access to the train shed by a convenient special stairway. The club rooms and the auditorium are also on this floor. Their object is to give the employees opportunities for recreation and study under wholesome physical and moral conditions. Space has been provided for a reading room, with a library, billiard and pool rooms, bowling alleys, a dining room, lavatories and kitchen. A gymnasium is also contemplated on the top floor. The auditorium, while it is rented for conventions and similar purposes, is primarily intended as a hall in which the men can meet and hear talks on various phases of their work.

On the third floor are the offices of the construction, rolling stock, power plant, claim and lighting departments, as well as the hospital. The latter contains operating and other similar rooms, in which injured people can be expeditiously and properly cared for. On the fourth floor are the offices of the president and his chief clerk, the directors' room and the printing office. The illustrations give some idea as to the completeness of the finish in every respect.

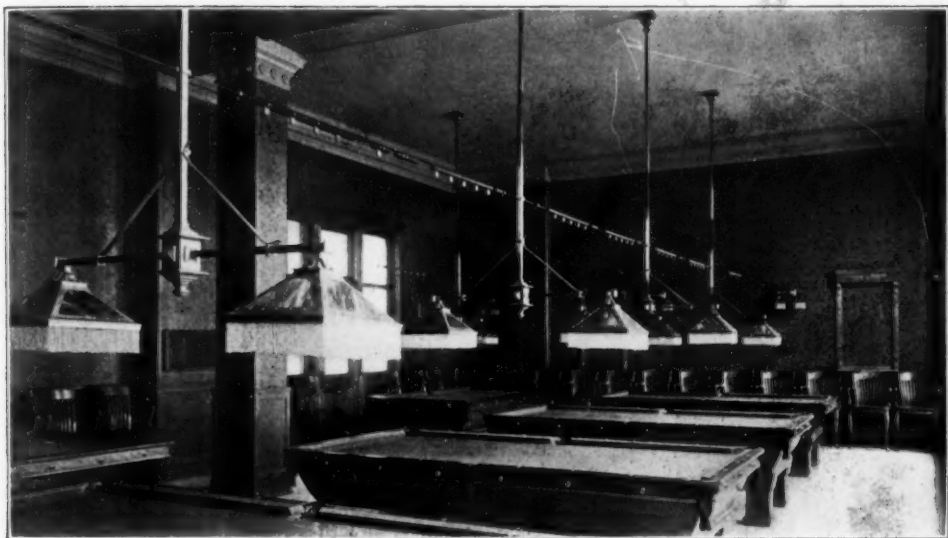




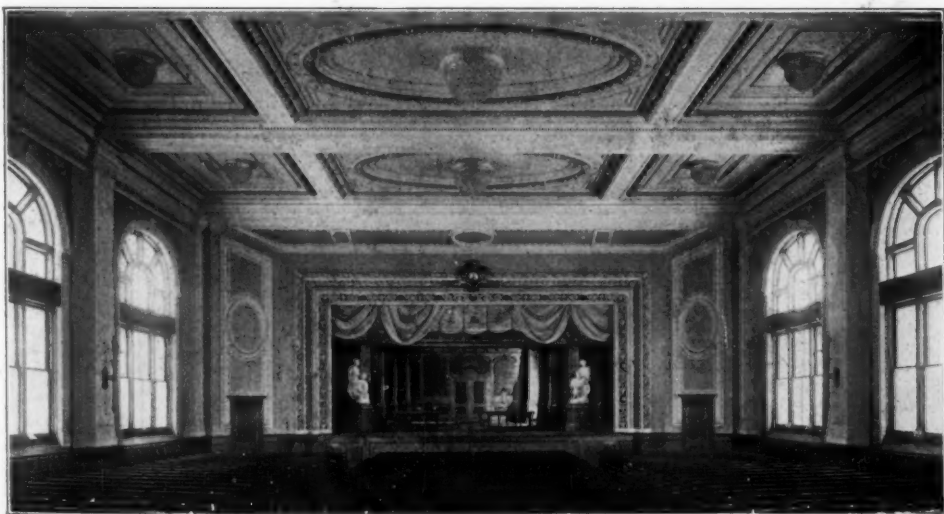
THE PRESIDENT'S OFFICE.



DIRECTORS' ROOM—MILWAUKEE PUBLIC SERVICE CORPORATION BUILDING.  
Milwaukee, Wis. H. J. Esser, Architect.



BILLIARD ROOM FOR THE COMPANY'S EMPLOYEES.



THE AUDITORIUM—MILWAUKEE PUBLIC SERVICE CORPORATION BUILDING.  
Milwaukee, Wis. H. J. Esser, Architect.



RESIDENCE OF SIGNOR CELESTINO PIVA.  
Washington Square West, New York City.

J. H. Freedlander, Architect.

# NOTES & COMMENTS

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## **TWENTY-THIRD ANNUAL EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK**

In the annual exhibition of the Architectural League of New York which closed on Feb. 22d at the Fine Arts Building in West 57th Street, New York, it was apparent to the critical observer of architectural exhibitions that the architects are realizing the necessity of their cooperation if they would make architecture more popular. In this exhibition there was a noticeable lack of the elaborate feats of draughtsmanship, large plans, elaborate scale details and working drawings over which the ambitious draughtsman was wont to pore in previous years, for new "tricks of indication" in drawing and color. To him the showing must have been, to a certain degree, a disappointment, for he found instead that a large portion of the wall space had been given up to the allied arts of design. In the architectural section of the galleries he found a predominance of small plans, mere diagrams in black and white and numerous charming "photographic bits" of the work exhibited. The range of the subjects illustrated was perhaps as wide as in former years but there was noticeable a scarcity of large undertakings. The exhibits of many of the older firms were missing and many new names were in evidence to fill the gaps. Suburban and country work predominated more than ever and competitive designs were comparatively few; the architectural schools and Beaux Arts Society exhibited fewer drawings than ever. We will not catalogue here the subjects exhibited; most of them are already fairly familiar to the readers of the architectural journals which illustrated in their pages the majority of them. It is more to the general character of the exhibition that we would call attention.

The hanging committee is to be congratulated on the general result of its efforts, although we should like to see them carry further the idea of interesting the non-professional. It is perfectly natural for such a committee to desire to supplement the exhibits by additional information in the form of a detailed catalogue (which, by the way,

is this year particularly attractive in its arrangement and manufacture) but would it not be a valuable addition to give the public right on the exhibits themselves, what might be called a detailed annotation of the building or subject portrayed and thereby immediately invite its interest in such a way that it will carry away from the exhibition a definite notion of something which has attracted its notice there? To cite an instance, would it not have been highly instructive and interesting to the hundreds of people who no doubt gazed on Mr. Herter's decorative painting, "The Attributes of the Arts," which occupied the position of honor in the Vanderbilt gallery, to have been able to read the purpose of that work, a reference to the figures of the composition and the conditions under and for which it was painted? We think that such a ready reference to and description of subjects could be extended to advantage to a majority at least if not to all the exhibits. We can think of no device which would act more powerfully to stimulate popular interest in the work of the architect and the artist, nor any method by which the layman would be more swiftly led to alter his point of view of architecture and art from ignorant adulation to intelligent interest and reason limited only by the capacity of his training and by his intelligence. At any rate the suggestion would seem worth trying; experience would readily determine its value or its worthlessness.

An added reason for imparting to the observer (who is too often merely a superficial spectator) information that really informs, is the remarks that one hears at such exhibitions and the blank expressions on the faces that one sees. A great many of these people do not understand sufficiently what they are looking at and consequently see little to hold their attention. If the architects and artists would enlighten these people they must afford them a stronger hold on the subject by some sort of popular instruction, and how could they seemingly better accomplish such instruction than by making their exhibitions illuminating in a way that every intelligent person can successfully try to understand.



### HOW TO REFRESH A BROWNSTONE FRONT

The "Architectural Record" has frequently illustrated different types of English base-ment houses which are replacing the old brown stone fronts on the residential streets of New York; but it sometimes happens that the owner of one of these old houses seeks to make it look somewhat more cheerful without entirely doing away with it. And the achievement of such a result is perhaps as difficult a task for the architect as is the design of an entirely new façade. We are glad, consequently, of an opportunity to illustrate a case in which an old brown stone front has been refreshed with conspicuous success. The accompanying photograph shows not only the reformed façade, which is situated on Washington Square West, but also on its left, a surviving brownstone front identical with the one which has been displaced. The reader can, consequently, measure very accurately the improvement in appearance, which the architect, Mr. J. H. Freedlander, has brought about, and he can immediately detect the means, which have been used for this purpose. The old stoop at right angles with the entrance has been replaced by brick stairs parallel to the line of the building, enclosed by a simple iron railing and leading to a spacious porch. A new brick door-frame has been constructed on this porch, somewhat beyond the line of the house thus emphasizing the entrance and affording a larger enclosed vestibule. A little balcony has been placed outside the windows on the first floor; and these windows have been cut down to the floor level, so as to give access to the balcony and at the same time to stamp with greater importance the drawing room within. The old, large window panes on every story have been replaced by small ones. The old, heavy mouldings around the openings have been torn off, and a simple square recess substituted. Every window, except those of the top floor, has its little window box, and the openings on this floor have been reduced in size, so as to mark their relative unimportance. Finally the old ugly galvanized iron cornice has been removed and the front terminates in a sort of a tiled hat brim. It should be added that the surface of the brownstone has received a good rubbing, which has improved its appearance, while at the same time the joints in the masonry have been penciled. These changes in detail have given the owner of the house a smart and attractive modern dwelling in place of a

dull and cheerless brownstone front; and the architect's success should encourage others to spare the owner the cost of a reconstructed front whenever such expense is not necessary.

### A COLONIAL RESTORATION

The restoration of the Governor's Room in the New York City Hall, through the liberality and public spirit of Mrs. Russell Sage, is both in itself and in its suggestion, a gratifying thing. The only possible objection—since the constitution of the committee of the Art Commission which is to supervise the work seems to insure artistic and faithful execution—is that it is a pity that an individual should have had to do what the rich city of New York might so fittingly have done. It is not a wholly satisfactory answer that there were no funds available for exactly this work; but, since there were no funds, it is good to find an individual willing to do it, and to do it fully and generously. The particular form which this expression of public spirit has taken is rather novel; but it is so widely approved that we may hope it may have many imitators, if their expenditures be similarly safeguarded. The room, in its artistic excellence and in its historical significance, is of more than local municipal interest. As perhaps the most important apartment in the beautiful old city hall, it has suffered various tribulations at the hands of would-be "improvers," until little vestige of its original simplicity—which writers of the time could justly call most elegant—remained. But now the discovery of the plans of its own architect, and the fact that the committee is composed of Robert W. DeForrest, Frank D. Millet, Arnold W. Brunner, Walter Cook, and John B. Pine, make certain a wise use of Mrs. Sage's gift.

### A BEGINNING OF THE HUDSON'S WEST BANK PARK OPPORTUNITY

In its January notes, The Architectural Record made a plea for nationalizing the Pallsades park opportunity on the Hudson River atop the Pallsades, opposite the northern end of the City of New York. The New York Herald of February 12th gives us the following news item:

Prompt action was taken in the Senate today upon the bill recently reported favorably from committee, which authorized the acceptance of the site of old Fort Lee, in New Jersey. The old fort was



used by the Continental army in the Revolutionary War, and marks the beginning of the Palisades.

The donor of the two and one-quarter acres of land which comprise the site is modest, and has not permitted his name to be made known, the negotiations being conducted by a firm of New York attorneys. Secretary of War Taft recommended that the site be accepted by the government. It is expected that the tract will be added to other land in the vicinity of the Palisades, and be used as a park.

This is a good beginning, for with its historic memories Fort Lee is a worthy entrance gate to the entire region north over which in Revolutionary days ran a military road which must have been assiduously patrolled by videttes and sentries in defence of the natural fortification formed by the cliff which protected the American army encamped in the country inland. The scene centers about Tappan where Andre was hanged and the tavern where he was imprisoned. The old Dutch house bearing the date 1700 in black bricks, where Washington had his headquarters, still stands in good condition. This old road loses itself at the little hamlet of "Palisades," on the hill above the western terminus of "Dobbs Ferry," known as Sneden's Landing, where there is located a stone block-house the scene of at least one encounter with the British and which recently was used as a studio by the sculptor, Tonetti.

Lower, by the river, are the remains of old earthworks, for this passageway of the Hudson is the first above Fort Lee where an army might well cross, with the possible exception of a similar pass between Yonkers and Alpine.

The little seed sown by us in these columns and taking visible form in this proposed reservation may some day grow so that future generations may praise our forethought in the possession of a beautiful breathing spot when the great city shall stretch along the base of the hill to the west of the Palisades and across the river to the east. May the good work go on.

#### PROGRESS IN CLEVELAND

The expert commission which is supervising the execution of "the Group Plan" for the public buildings of the city of Cleveland, has issued a second edition of its original elaborate report "with supplement indicating the progress of the improvements." The commission is composed of Daniel H. Burnham, John M. Carrère and Arnold W. Brunner. The second edition comes not quite four years after the first. It reports all of the land required for the sites of the court-house and city hall purchased, as recom-

mended by the board, the cost of it amounting in round numbers to \$1,648,000; very much of the land for the Mall already purchased—and now, we believe, cleared; the post office about completed; the site for the public library definitely accepted; the working drawings for the court house approved (May, 1906) and the preliminary plans for the city hall approved (March, 1906). Illustrations and descriptions of these structures and of the post office are included in the supplement. The story is an interesting and encouraging record of accomplishment.

#### PRIZES FOR ARTISTIC WORK

Although as this is written the awards have not been announced, there can be cordial commendation of the plan of the Metropolitan Improvement League of Boston to award prizes for that local work of the year which is best in architecture, sculpture, mural decoration in public buildings, street fixtures, festival decorations, and artistic advertising. The prizes are to be gold, silver and bronze medals, and honorable mentions. Their award is to be the occasion of a banquet, which may become, it is suggested, an annual March civic festival. The spirit of the thing is almost mediaeval—redolent of the Renaissance, though recently revived in Paris, Brussels, Buenos Ayres and other places. It wakes to conscious realization that popular feeling that wherever a beautiful thing is created for the public to behold—even though the ownership be private—there something is added to the common wealth. It is well to make public recognition of this. In some European capitals, the community's gratitude for a beautiful house is expressed in a remission of taxes. This award of medals is a degree finer, because above pecuniary consideration. Socially, too, the plan is good, since its tendency must be slightly to modify the envious bitterness toward wealth.

#### THE FOUNDATION OF TALL BUILDINGS

The discussions which have been called forth by the revision of the Building Code of New York City have naturally turned to a very considerable extent upon the problem of the skyscraper. With the erection of a number of buildings over twenty-five stories high that problem has assumed a more acute phase in New York than in any city in the country; and many proposals have been

made looking in the direction of a limitation in the height of buildings. Among these proposals that of the Revision Commission was one of the most novel and ingenious. It did not apparently seek absolutely to limit the height of buildings; but it did seek to make the owner pay for the privilege of building high by means of a proportionate sacrifice of his ground area. A very tall building, that is, would necessarily be separated from its neighbors by larger courts than a lower one, and such a method of limitation undoubtedly seems at first glance to be reasonable.

It has not, however, been received with very much favor. All the property-owners, real estate speculators and building contractors interested in the construction of sky-scrapers have protested against it, and to all appearances their opposition will prevail. Public opinion is negligent and indifferent in such matters; and consequently the much more aggressive body of opinion, which is the result of private interest usually has its own way—particularly when the supposed representatives of the public interest are a group of men, no more intelligent, well-informed or disinterested than the New York Board of Aldermen. An American legislative council almost always acts in accordance with the wishes and opinions of an aggressive private and special interest, unless an equally aggressive body of public opinion compels them to consider the public interest as well; and hitherto no such body of public opinion has been formed in relation to the limitation of sky-scrapers. It is very probable, consequently, that the current attempts to establish such a limitation will fail—as all previous attempts have failed. The height of sky-scrapers will continue to be regulated only by business conditions, until some striking disaster will suddenly and sensationally expose the public dangers incurred by the lack of any regulation.

When the time comes, however, as it assuredly will, for some effective regulation, it is possible that such regulation will assume a form advocated by Mr. Ernest Flagg. Mr. Flagg by no means approves of the limitation proposed by the commission, who prepared the revised version of the New York Building Code. The effect of the proposed ordinance would undoubtedly be the same as that of a rigid limitation of the height of buildings. Under such a provision there would be a level in relation to every possible site, higher than which it would not pay to build. This level would vary in different cases; but the general effect would be to lower by several stories the height to which buildings are

usually erected on very expensive land. The carrying out of such a proposal would undoubtedly mean a discrimination in favor of property-owners, whose land had already been improved with tall buildings; and it would for a time at least decrease the value of unimproved property in the same neighborhoods. Mr. Flagg, consequently, would not depart entirely from the policy hitherto adopted by the city. He would permit the erection of buildings to any desired height; but he would safeguard this permission with conditions, which would prevent it from becoming harmful to abutting property or dangerous to the public interest.

The sort of regulation which Mr. Flagg proposes would permit the property-owner to adopt one of two courses. In case he wishes to erect a sky-scraper, he must either buy so much land that he can almost completely surround his tower with a lower building. Or else in case his tower actually adjoins other people's property he must pay this adjoining property owner for the right to build his towering structure—a payment which would be equivalent to purchasing his neighbor's privilege of erecting a building over a certain height. The effect of such regulation would be to permit the erection of a few lofty towers in every block surrounded by buildings of a much lower, although still considerable height; and an effect of this kind would combine more economic advantages with fewer disadvantages and public dangers than would any other form of regulation, always assuming, of course, that the towers are constructed and finished with absolutely fireproof materials.

No doubt the regulation, proposed by Mr. Flagg would deprive property owners of opportunities which they now enjoy, but such a deprivation would only be a legal recognition of disabilities imposed by economic conditions. At the present time a property owner can ostensibly erect a building of any height upon a lot of any size; but his legal liberty in this respect is confined by certain obvious economic conditions. The value of any sky-scraper he erects is very much diminished by a failure absolutely to secure good light and air for the offices in the building. The owners of the first twenty-story buildings erected in New York began to realize this truth, when they were forced to acquire abutting property at a high value in order to prevent the erection thereon of buildings as tall as theirs; and at the present time no prudent capitalist will erect a building even twenty stories high without protecting himself against subsequent interference. Much more is this the case when

the proposed building is twenty-five, thirty or thirty-five stories high. Whenever such towers have been planned, they have always been surrounded either by streets or by private property under the same ownership. It is this practice which Mr. Flagg proposes to recognize legally, and such a course would merely bestow a definite legal form upon a practical condition from which no property owner can escape. He might escape from it by buying a whole block and then covering as much of the area as he could with a thirty-five story building; but the purchase of a whole block in the business districts of Manhattan has now become almost an impossible task even for insurance companies. Individuals or corporations who own whole blocks should, however, be legally prevented from covering the area with a building over a certain height; and in other cases the proposed regulation would, as we have explained, merely define a prevailing business practice.

There is also an architectural aspect of the matter which should not be ignored. From an exclusively architectural point of view, the sky-scraper will doubtless always remain an excrescence, not because it is twenty-five stories high, but because its height is wholly out of proportion to width of the street on which it is situated. One can imagine the creation of a magnificent architectural effect in case twenty-five story buildings, well designed for their purpose, were situated at certain points around the Place de la Concorde in Paris; except in rare instances our sky-scrappers will never obtain the propriety and scale which they might have when situated on very wide streets or spacious squares, and as a matter of fact, streets broad enough to give them scale, would be too broad for practical convenience. In this sense the sky-scraper must always remain architecturally heretical; but if our masters will have them, they would, under Mr. Flagg's proposed regulation, appear most assuredly to their very best advantage. A block of buildings from twelve to fifteen stories high with here and there a thirty-story tower breaking through the sky line would certainly present a picturesque appearance, and afford many attractive opportunities to the architect. A city in which such spectacles were numerous would not be a beautiful city; but it might be extraordinarily impressive; and there can be little doubt that in the course of the next twenty years the Borough of Manhattan in the City of New York will in its central portions assume such an appearance. And this consummation can be anticipated with equanim-

ity even by lovers of good architecture provided all the new buildings, low or high, erected in these districts are thoroughly fire-proofed; and providing the street layout is made adequate to the stress of traffic created by such a dense business population.

#### MISTAKEN "IMPROVEMENT"

Under the alluring title, "The Gentle Art of Disfiguring Old Churches," J. Cleveland Cady contributed to a recent "Outlook" an article, made emphatic by concrete stories, that showed the architectural injury too often wrought in "smarting up" the churches of old villages. And he adds, this "ill-treatment of ancient churches is by no means confined to rural communities." His protest is one of which there was need of utterance, but it isn't easy to see how the danger can be warded off. Education is a slow process, where there is need of haste, and at best it is not over thorough. He points out the danger, in a peaceful little Colonial church, of the big memorial window that the richest farmer puts behind the pulpit—"loud and inharmonious in color, frivolous in design, completely out of scale, and in conflict with the refined and restful feeling of the admirable old church." Sometimes the pulpit itself is the subject of attack; and he tells of one village church of which a loyal brother said, with pride: "Not long ago our Endeavor Band raised money and bought some transparent paper imitating stained glass and put it on the old window panes, and it seems just like the real thing—don't it now? You used to look through them and see only the blue sky, and apple boughs, and restless birds making their nests, but now—" Again, it is a tower or ceiling that is done over, or an incongruous addition that is made to the structure—all very evil things indeed, to be regretted and talked against, and which it would be well to have the family religious papers take up, since they might reach the proper persons.

#### DOMESTIC GLASS

When colored glass first became a factor in the decorative arts of this country, for a time it was extensively employed in domestic embellishments, but after a while it ceased to be used in the finer houses, and all because it fell out of the hands of artists into those of commercial men, who had but

one aim in view: the making of money. The sins they committed with colored glass in the name of art were indeed startling, and soon relegated the use of the material to cheap flats and corner saloons. It is hard to believe that this perversion can last forever and that colored glass will not once again take its place in the higher forms of domestic decorations. At one time it looked very much as if ecclesiastical glass would fall into the same state of deterioration and degradation, but happily a vigorous protest and a determined resistance from a number of earnest and conscientious architects stemmed the tide, and rescued it from the maelstrom of commercialism, bad taste and secularization. This, together with a greater knowledge of the principles of Christian art among the people, the realization on the part of building committees that the glazing of a church should be left in the hands of the architect, as much as any other detail in the architectural scheme, and that works of art are not sold by the square foot, has in these later years largely banished the mere trader and his "art glass" from the field of ecclesiology. He can no longer, at the behest of some ignorant donor, invade a church building, remove mullions at will, and place in the window openings a highly colored, badly drawn and devotionless glass picture.

There is no reason why domestic glass should not be restored to its proper place in the decorative arts, if architects will only lend a hand, and insist that when colored glass is used, it must be of the best in design and quality, and at a price which will permit artists of ability to give their time to the study of glass as a medium of artistic expression. Then, and not until then, will good windows be made, and domestic glass be a delight to all lovers of color.

It is true that from time to time windows have been created, and placed in public buildings or private residences, that are indeed works of art, but they are few in number and have produced no appreciable diminution in the output of the garish and commonplace products of commercial establishments, and have in no way directed the trend from mediocrity to the artistic and beautiful. It is within the power and province of the architects to bring about this change, and windows like the two which have recently been placed in a country house near Philadelphia, and are here illustrated, should stimulate them to make the effort. They must keep in mind, however, that a good window, like a good oil painting, commands a high price, and it is absurd to sup-

pose an artist will make a window for less than a painting, or will devote his time to an art which is not, as yet, fully appreciated in highest manifestation.

The two windows illustrated were designed by Miss Violet Oakley, and all the painted portions are the direct work of her brush. The themes portrayed are Shakespearian, the first being from the *Tempest*: Act I., Scene II.—Ferdinand listening to the song of the invisible Ariel—

Fer. Where should this music be? I' the air or the earth?

It sounds no more; and, sure, it waits upon  
Some god o' the island. Sitting on a bank,  
Weeping again the king my father's wreck.  
This music crept by me upon the waters,  
Allaying both their fury and my passion  
With its sweet air: thence I have follow'd it,  
Or it hath drawn me rather. But 'tis gone.  
No, it begins again.

with Prospero and Miranda in the background, the latter exclaiming:

Mir. What is't? a spirit?

Lord, how it looks about! Believe me, sir,  
It carries a brave form. But 'tis a spirit.

Pros. No, wench; it eats and sleeps and hath such senses

As we have, such. This gallant which thou seest  
Was in the wreck; and, but he's something  
stain'd

With grief that's beauty's canker, thou might'st  
call him

A goodly person: he hath lost his fellows  
And strays about to find 'em.

Mir. I might call him

A thing divine, for nothing natural  
I ever saw so noble.

The second window is from *Hamlet*, that memorable scene in Act III., where the guilty King and Queen flee, after witnessing the tragic catastrophe of the play, which *Hamlet* caused to be acted before them, in order to "catch the conscience of the King."

Ham. He poisons him I' the garden for his estate.

His name's Gonzago: the story is extant, and  
written in very choice Italian: you shall see  
anon how the murderer gets the love of Gonzago's wife.

The composition of these windows is all that could be desired; the dramatic situation illustrated has been handled in a most masterly and decorative manner, which at once commends itself to the connoisseur, while the arrangement of the accessory ornamentations cannot help but receive a like commendation from the decorator. The color beauty of the windows is indescribable; so subtle is the scheme of coloration, to be understood it must be seen. Every piece of glass has been carefully selected, not only for its color but for its motion; every lead line has been given a thoughtful consideration; and every part has been governed by a strict adherence to a pure mosaic motive; while the glass painting is indeed glass painting and not an imitation of painting on canvas. The very faults in drawing, which are apparent here and there, but add another



beauty, and, in a way, emphasize the decorative character of the windows.

Surely the day of domestic glass, having an artistic value, has not passed away, as long as there are artists of Miss Oakley's genius to design and paint windows, and associations of artists and craftsmen to construct and interpret in glass the artist's thoughts, for these beautiful windows cannot help to call forth orders from cultivated people, so that Miss Oakley and other artists may be induced to adventure into the field of domestic colored glass work.

C. C.

**UNIVERSITY  
SCHOLARSHIPS  
OF THE  
ARCHITECT-  
URAL LEAGUE  
OF AMERICA  
FOR 1908-1909**

Harvard University offers to members of the Architectural League of America three scholarships in architecture. These scholarships are divided into two classes—

Class A. One scholarship which is restricted to those who can pass the entrance examinations of Harvard College. Class B. Two scholarships for special students for which there is no examination, but a competition in architectural design to select the holders.

Class. A. This scholarship to regular students is for one year with the possibility of reappointment for a second year, conditioned upon the record of the students made at the University. In order to pass the examination candidates should be graduates of a good high school or have an equivalent preparation. In June Harvard University holds examinations for admission in the principal cities of this country. The entrance examinations for this year are held from June 22d to June 27th inclusive. These regular entrance examinations will be taken by Class A candidates and the scholarships will be awarded to the student who passes with the highest standing. For a list of the subjects of the examination, the places of same for this year, and for other information regarding admission to Harvard College write for pamphlet to Mr. J. G. Hart, Secretary, Cambridge, Mass. This officer will, upon request, also send copies of recent examination papers. Each club secretary will also have a copy of the above pamphlet regarding admission. Applications for such examinations should be sent to that officer of Harvard University by April 1st, and by this date the Chairman of the Department of Architecture, Harvard University, should receive applications for the scholarship, such application being approved by the Secretary of the Architectural

Club of which the applicants are members, and applications from individual members being approved by the permanent secretary. Candidates for the above scholarship would do well to review carefully those subjects in which they are to be examined.

Class B. Two scholarships for special students, each for one year, will be awarded upon the result of a competition in architectural design, on a program prepared by the Architectural Department of Harvard University. The competition in the various cities will be conducted by the League through the organizations affiliated with it, and will be judged by the Professor of Architecture of Harvard University and a Boston architect selected by the League. Provision will be made for individual members of the League.

Candidates for the above should notify the Chairman of the Committee on University Scholarships by April 1st of their intention to take part in the competition. This competition will be opened by a preliminary sketch to be made on Saturday, May 2d. One week will be allowed for making the final drawings. Directions regarding the conditions under which these drawings are to be made, their size and manner of sending them will be issued later. These scholarships entitle their holders to free tuition in Harvard University during the periods stated above, the cost of such tuition otherwise being \$150 per year.

It is hoped that a large number of men will avail themselves of the splendid opportunity presented by the above. Further information may be had from the Chairman.

The Architectural League of America also has a foreign traveling scholarship, for information regarding which apply to Professor Percy Ash, Chairman, Committee on Traveling Scholarship, George Washington University, Washington, D. C.

**A COMPETITION  
FOR  
LOW-COST  
DWELLING  
HOUSES**

It is proposed to erect at East Walpole, Mass., in connection with the F. W. Bird & Son's paper mills, a group of low-cost one-family cottages, similar in construction to experiments which the Bird concern has already made with its products, as an exterior covering. A competition will be conducted for the purpose of selecting designs for such structures, the cost of which is not to exceed three thousand dollars.

The competition will be conducted under rules of the American Institute of Architects.





STAINED GLASS WINDOW, PORTRAYING FERDINAND LISTENING TO THE SONG  
OF THE INVISIBLE ARIEL.

Tempest: Act I, Scene II.

(Copyright by Violet Oakley, 1907.)



STAINED GLASS WINDOW, SUBJECT: SCENE FROM HAMLET, ACT. III., IN WHICH THE GUILTY KING AND QUEEN FLEE, AFTER WITNESSING THE TRAGIC CATASTROPHE OF THE PLAY WHICH HAMLET CAUSED TO BE ACTED BEFORE THEM.

(Copyright by Violet Oakley, 1907.)

Professor Francis W. Chandler, of the Massachusetts Institute of Technology at Boston, Mass., will receive competitive drawings on or before April 1, 1908, in accordance with a program which is being distributed to all architects by F. W. Bird & Son: With Professor Chandler, Mr. Charles Collens, of Allen & Collens, architects, acts as judge in the competition.

#### BALTIMORE'S ADVANCE

The growth of municipal improvement ideals in Baltimore makes a significant chronicle. With the great fire, there was a suddenly awakened wish on the part of the people that the catastrophe might be changed into an opportunity for a better city plan in the burned district. No plan was in readiness; but a hastily appointed local commission did the best it could, proposing the widening and changing of many streets. Its recommendations were carried out. Following this accomplishment, came the engagement of the Olmsted, through the efforts of the Municipal Art Society, to make a park plan. A very elaborate report, looking far into the future, was outlined. But step by step, and with remarkable progress, these recommendations are being realized. And now has come the wish for a civic centre, such as other cities are developing. Tentative plans were made by local men, and then an expert commission from outside—composed of Messrs. Carrère, Brunner, and Olmsted—was called in to pass upon it. Ground has been selected east of the city hall, and it is proposed to purchase it at once, put it in proper condition, and then group around it the five new public buildings which are going to be needed in the near future. These are an annex to the city hall, a new police headquarters, a new central police station, a state building and a new polytechnic institute. Each building will have to be financed separately when its turn comes, just as it would have to be whatever its location; but this plan makes possible a grouping and a cumulative effect. As a recent court decision has considerably increased the revenues of the park board, which are mainly derived from a street railroad tax, it is proposed that the income shall be used to pay the fixed charges on a big loan, with which the civic centre property and certain property for park exten-

sion and a new boulevard can be purchased. The whole makes a remarkable story of advance.

#### IMPROVING SMALL STATIONS

In regard to the improvement of the buildings and grounds of small stations, by railroad corporations that are not likely to authorize expenditures for sentiment only,

Joseph T. Richards is quoted as presenting the railroad's viewpoint in a recent address as follows—the significance of the statement being that the speaker is the general engineer of the Pennsylvania Railroad: "Many years ago," said he, "the managers of the Pennsylvania road were convinced that improvements about suburban stations which could be made on the ground, where there was property surrounding the station, were equally important with the station itself, and, in fact, it has been held by many citizens as well as railroad managers that the station property was of first importance. . . . It was found that the towns with stations having beautiful surroundings were growing more rapidly than others, and in taking up the subject with property owners at the neglected stations, it was mutually agreed that the company and the property owners should co-operate, and wherever there was a disposition on the part of property owners to build houses the railroad would build a station—not necessarily an expensive building, but with attractive surroundings of lawn, shrubbery and flowers, providing a considerable area of ground for the purpose. While all was not done in a year, the policy was continued and the manager of this road has declared that if he could add a half dozen new houses to a town it would pay the interest on \$5,000 or \$6,000 expended for station purposes, if applied under what we would call civic betterments." This is an interesting and helpful presentation of the economic argument.

#### IN RE ILLINOIS ATHLETIC ASSOCIATION.

The building which is shown on page 222 of the March issue is not, as it is there stated, of the Chicago Athletic Association, but of the Illinois Athletic Association. The recent addition to the Chicago Athletic Club was published in the February issue of this year.